This is a preliminary, unedited transcript. The statements within may be inaccurate, incomplete, or misattributed to the speaker. A link to the final, official transcript will be posted on the Committee's website as soon as it is available. [PAGE] NEAL R. GROSS & CO., INC. RPTS SALANDRO HIF318180 RESPONSE AND RECOVERY TO ENVIRONMENTAL CONCERNS FROM THE 2017 HURRICANE SEASON TUESDAY, NOVEMBER 14, 2017 House of Representatives Subcommittee on Environment Committee on Energy and Commerce Washington, D.C.

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The subcommittee met, pursuant to call, at 10:00 a.m., in Room 2123 Rayburn House Office Building, Hon. John Shimkus [chairman of the subcommittee] presiding.

Members present: Representatives Shimkus, McKinley, Barton, Murphy, Blackburn, Olson, Johnson, Flores, Hudson, Walberg, Carter, Walden (ex officio), Tonko, Ruiz, Peters, Green, DeGette, Dingell, Matsui, and Pallone (ex officio).

Staff present: Ray Baum, Staff Director; Mike Bloomquist,

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Deputy Staff Director; Allie Bury, Legislative Clerk,
Energy/Environment; Karen Christian, General Counsel; Jerry
Couri, Chief Environmental Advisor; Wyatt Ellertson, Research
Associate, Energy/Environment; Adam Fromm, Director of Outreach
and Coalitions; Theresa Gambo, Human Resources/Office
Administrator; Jordan Haverly, Policy Coordinator, Environment;
A.T. Johnston, Senior Policy Advisor, Energy; Mary Martin, Deputy
Chief Counsel, Energy & Environment; Alex Miller, Video
Production Aide and Press Assistant; Tina Richards, Counsel,
Environment; Dan Schneider, Press Secretary; Hamlin Wade, Special
Advisor, External Affairs; Everett Winnick, Director of
Information Technology; Andy Zach, Senior Professional Staff
Member, Environment; Jeff Carroll, Minority Staff Director;
Jacqueline Cohen, Minority Chief Environment Counsel; Caitlin
Haberman, Minority Professional Staff Member; Rick Kessler,
Minority Senior Advisor and Staff Director, Energy and
Environment; Jon Monger, Minority Counsel; Alexander Ratner,
Minority Policy Analyst; Andrew Souvall, Minority Director of
Communications, Outreach and Member Services; Tuley Wright,
Minority Energy and Environment Policy Advisor; C.J. Young,
Minority Press Secretary; and Catherine Zander, Minority
Environment Fellow.

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Mr. Shimkus. We will ask staff to close the back door, please, and ask the committee to now come to order, and I will recognize myself for five minutes for an opening statement.

I want to thank all our witnesses for joining us today. We are especially grateful for those of you who have traveled significant distances to be with us today to share your stories about the hurricanes that tore through our country this fall and about the impact of those hurricanes on the environment.

We know that many of you are still in the trenches of dealing with the response and recovery efforts, so your willingness to take the time to be here today does not go unnoticed.

This fall, the continental United States and some United States territories in the Caribbean experienced severe weather from five hurricanes, including extensive damage due to landfall from four storms.

Hurricane Harvey impacted Texas and Louisiana; Hurricane Irma hit Florida, Georgia, Puerto Rico, and the U.S. Virgin Islands; Hurricane Maria, again, hit Puerto Rico and the U.S. Virgin Islands; and Tropical Storm Nate impacted Louisiana and Mississippi.

The Energy and Commerce Committee is conducting a series of

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hearings to look at the response and recovery efforts conducted during this hurricane season so we can figure out what went well and what we could we have done better, what we need to do is going -- and what we need to do going forward.

We are also focused on what Congress can do to assist the impacted communities as they work to get back on their feet.

Today we are focused on the environmental impacts of these hurricanes and the response efforts. No two hurricanes are alike and a storm's individual characteristics like the speed, intensity, and amount of precipitation, play a large role in the extent of the storm's impact on natural resources and the environment.

For example, as we will hear from several of our witnesses,
Hurricane Harvey may have significantly
impacted several Superfund sites in Houston because of the record
rainfall and flooding.

Likewise, in Puerto Rico, Hurricanes Irma and Maria uncovered the intensified issues associated with aging and inefficient energy infrastructure, contaminated sites that are rapidly multiplying, landfills that are already overflowing, and possibly the most contaminated drinking water supply in the United States.

Residents across the island are still without power and

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reliable source of -- and a reliable source of drinking water.

Many are drinking potentially contaminated water because water

purification systems have largely failed in the wake of the storm,

and in the municipality of Dorado citizens resorted to drinking

well water from Superfund sites.

Today, we will look at the response efforts by the

Environmental Protection Agency and the states for the impacted
communities. We will consider environmental issues in the
hurricane-impacted communities such as the availability of clean
drinking water, the potential for air
releases, the impact on Superfund sites and solid and hazardous
waste disposal facilities, and risk management and emergency
response plans.

We hope to hear from the affected EPA regional administrators about their efforts, what they accomplished, what remains to be done, and what can be done better in the future and how Congress can assist.

We will also hear from several private sector witnesses from academia as well as people who are serving in the boots-on-the ground roles in Texas and Puerto Rico, and people who can weigh in on what needs to be done regarding the drinking water systems in the affected communities.

Again, I thank all our witnesses for being here. I hope the

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discussions will start today about the response and recovery efforts, the National Response Framework, and about whether statutory or other changes need to be made.

We will adjust the beginning as we continue to oversee and assist the federal and state governments as they carry out the response and recovery efforts for the communities impacted by the hurricanes.

And before I yield back my time, I am going to yield 30 seconds to Marsha Blackburn.

Mrs. Blackburn. Thank you, Mr. Chairman.

I want to welcome our witnesses. So pleased that everyone is here. There are so many different aspects to preventing, planning for, responding to the natural disasters, as the chairman has said, and these events are taking a toll on our communities, also on our nation.

And so much is involved in it -- today, the environmental aspects, but also looking at the health aspects and we know that they all have to work hand in hand.

I have got a piece of legislation, H.R. 1876, the Good Samaritan Health Professionals Act, that deals with that one component of making certain that people are cared for appropriately.

But we thank you for being here. We want to do what is right,

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we want to be helpful to the process, and we want to make certain that citizens are cared for in these situations.

And I yield back.

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Mr. Shimkus. Gentlelady yields back her time to me, and before I turn to the ranking member I also want to mention that we will have sitting in with us Jenniffer Gonzalez, who is the resident commissioner of Puerto Rico. She's going to be sitting at the dais but per committee rule she can't ask questions. She can't make an opening statement. But when she comes I will make sure I recognize her.

With that, I yield back my time and yield five minutes to the ranking member, Mr. Tonko, for five minutes.

Mr. Tonko. Thank you, Mr. Chair.

It is important that we are holding this hearing and I thank you for doing that.

I was sad to hear the news that our friend, the former ranking member of this subcommittee and the current ranking member of our Health Subcommittee, Gene Green, will be retiring at the end of the 115th Congress.

I know Gene was here a few moments ago. But I want to thank him for his friendship and know that he will -- and I certainly know that he will be fighting for disaster assistance for Houstonians for the next 13 months. So we wish him well.

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And I thank all of our witnesses for being here. It is great to have EPA witnesses join us on this very important topic. I hope Administrator Pruitt will appear before the subcommittee at some point in the near future as well.

I want to especially take this opportunity to welcome

Administrator Peter Lopez. Mr. Lopez and I have worked together

for many years. His former Assembly district overlapped a

portion of New York's 20th Congressional District.

Our constituents were hit hard by Hurricane Irene and Tropical Storm Lee, and we well know that disasters don't discriminate.

Peter, you are an outstanding public servant and I wish you well in your new role and it is great to have you at the witness table today.

Mother Nature does not discriminate. She doesn't care if you are a Republican or a Democrat, and our government must be ready to respond to help everyone get back on their feet.

So I hope you can take the lessons learned over the years both in the response and recovery efforts and apply them to assist our fellow Americans in need now.

We know the recovery effort will be long. But, sadly, in Puerto Rico and the United States Virgin Islands the response effort is still underway.

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Far too many Americans continue to live without electricity or safe drinking water and that is simply unacceptable.

On today's panels we will hear about the work done in the aftermath of Hurricanes Harvey, Irma, and Maria, to address environmental concerns.

EPA plays an important role in disaster response by assessing and restoring water systems and Superfund sites, responding to chemical and oil spills, and monitoring air quality.

I know there will be a wide variety of issues addressed today including Superfund, chemical safety, air emissions, and debris management.

I am particularly concerned about water systems, which we know are often aging and in disrepair, even without the stress of a disaster.

There are legitimate questions as to whether state revolving fund loans are the most appropriate vehicle to get communities back on their feet following such devastation.

In Texas and in Florida, flood waters were contaminated with bacteria and toxins. Water included high concentrations of E. coli as well as elevated levels of lead, arsenic, and other heavy metals.

In Puerto Rico, we have heard stories of people drinking from and bathing in contaminated rivers. There have been a number of

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207 | reported cases of leptospirosis.

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The media even reported people using a well located -- a well located on Superfund site, which only after the fact was determined to meet federal drinking water standards.

These examples show the direness of the circumstances that Americans faced following these disasters -- no power, no clean water, and driven to acts of desperation.

These hurricanes should serve as a reminder that EPA is one of our nation's most essential public health agencies. EPA has important work to do as recovery for these disasters begins.

But the drastic proposed reduction to EPA's budget, personnel, and environmental safeguards will make it harder to fulfil its mission including supporting disaster response and disaster recovery.

Preserving a strong EPA is critical to the health of Americans. These storms have made that clear. A robust EPA will make communities more resilient.

For example, today we will hear about the risks posed to Superfund sites by disasters and the work EPA has done to assess these sites both before and after storms.

But the best and perhaps only way to mitigate the risks to these sites is through actual remediation. Reducing funding to the Superfund program will not make cleanups happen any quicker

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230 and will not make sites less vulnerable to storms.

I would also be remiss if I did not mention climate change and the role EPA should be playing in addressing that threat. If we continue to ignore climate change, increasingly severe disasters will become the new normal and we can expect many more hearings like this one in the future.

I hope we can work together to ensure EPA has the resources necessary to support disaster response efforts and make our communities more resilient to disasters before they occur.

I look forward to hearing from the witnesses today and yield back and, again, thank you, Mr. Chairman.

Mr. Shimkus. Gentleman yields back the time.

The chair now recognizes the chairman of the full committee, Mr. Walden, for five minutes.

The Chairman. I thank the gentleman.

Today marks the third hearing our committee has held to examine the response and recovery efforts for the hurricanes that ravaged our communities along the Gulf Coast and our island territories in the Caribbean.

And I would note for the committee in response to our concern about the situations especially in the island territories we will be having a congressional delegation -- a pretty high level limited seating capacity trip -- to Puerto Rico and the Virgin

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Islands coming up most likely early next month to have -- get a firsthand look at the situation. You will get more information as we go along.

Hurricane response and recovery deals with human tragedy. These storms didn't just damage property and displace residents. They delayed dreams and fundamentally altered the lives and fortunes of millions of Americans in ways big and small.

While we cannot undo the damage of these storms we can work to ensure the federal government is diligently doing its job to aid recovery and not making it harder to get that job done.

Public health risks typically associated with natural disasters including drinking water contamination and the leeching of hazardous waste are varied and include heightened risk of infectious disease, as you all know.

These risks can be particularly dangerous for vulnerable populations such as individuals with immuno suppressed and the elderly and infants, clearly.

Our job this morning is to better understand who in the context of environmental concerns that bear on public policy is engaging in the tough work to help speed recovery, what they are doing or not doing to make hurricane victims lives better and the challenges they face, when will something resembling normalcy return and where are the resources coming from to make recovery

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a reality and what private efforts can be leveraged. So it is all the who, what, when, where, and why and how.

We also need to determine whether the federal presence is helping or hurting that recovery and, if so, how do we -- how do we change things that need to be changed.

Some of the areas we hope to cover today will have to go unaddressed for now. We had hoped to have a Puerto Rico solid waste official testify via video conference about the situation on the ground there.

Last week, she confirmed she would testify but then, unfortunately, power went down on the island and our ability to communicate with her was lost.

We also hoped to hear from the Federal Emergency Management
Agency about its work leading response efforts and improving
funding for recovery activities. But they were unable to find
someone who could testify. Pretty remarkable.

We will continue working with FEMA to ensure these questions are answered so we can feel confident in both statutory authority and administrative practice, support rational decision making, and promote the needs on the ground.

That said, I want to welcome our witnesses today. Thank you for being here. Some of you have come great distances but each of you has important lessons for our committee to learn and we

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appreciate your participation.

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I am confident that in the midst of all this bad news you will provide us some stories of dedication, innovation, gumption, acts of personal sacrifice, kindness, and courage.

These should inspire us to be equally fearless and committed in our work ahead. And in this committee and its broad jurisdiction we do roll up our sleeves and search for solutions to the various challenges that present themselves after a major disaster and we want to make sure the agencies under our jurisdiction are well prepared, responding appropriately, and that lives are improving as a result.

If not, we want to know about it so that we can fix it. I expect that this will be an excellent hearing for us to identify vulnerabilities and assess what is needed to better prepare and respond to this and future storms and disasters.

So thank you for being here. We look forward to working with you. I know the former chairman of the committee, the vice chairman, has a special announcement he'd like to make now about some of our folks in the audience who are with us today.

So with that, Mr. Chairman, I would yield to the gentleman from Texas the remainder of my time, Mr. Barton.

Mr. Barton. Well, I thank you, Chairman Walden. Thank you, Chairman Shimkus and Mr. Tonko, for holding this hearing.

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I had the privilege way back when -- have been a White House fellow under President Reagan back in 1981 and part of 1982 and today I have the current class of White House fellows on their visit to the Hill.

They are in the back lefthand corner. They are 14 of the best and brightest young Americans. They work for Cabinet secretaries or agency heads. They are full of vim and vinegar and I told them they are in the best committee in the House. So we want to welcome our White House fellows and wish them the very best in the years ahead.

[Applause.]

I also want to welcome our two Texas witnesses, Dr. Shaw and Mr. Sam Coleman. Mr. Coleman is the acting administrator -regional administrator, Region 6, at EPA in Dallas, and Dr. Brian Shaw is head of the TCEQ down in Austin, Texas. They are both good men and good friends of mine. We welcome them to the committee.

With that, I yield back, Mr. Chairman.

Mr. Shimkus. Gentleman yields back his time.

The chair now recognizes the ranking member of the full committee, Mr. Pallone.

Mr. Pallone. Thank you, Mr. Chairman.

Environmental impacts from this season's hurricanes have

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wreaked havoc and continue to threaten public health in serious and unacceptable ways.

The federal government's response to these hurricanes has been disorganized and in the instance of both Puerto Rico and the Virgin Islands it has been too little and too late and we must step up our efforts.

Two weeks ago, the Subcommittee on Energy held a hearing focused on energy infrastructure recovery efforts, which is a central and ongoing concern, and last week we saw a major setback in the recovery of the electric grid in Puerto Rico when a repair transmission line failed.

And today, more than two months after Hurricane Maria, more than half of the island is still without power and that is adversely affecting everything from health care to access to safe drinking water.

This lack of electricity puts lives at risk and must be addressed. Unfortunately, at this point, it does not appear that any agency within the federal government is standing up and taking full control of this effort.

The Army Corps and FEMA say the other is in charge and that is unacceptable. Someone needs to take the lead now.

This is also far from the only challenge facing communities in Texas, Florida, Puerto Rico, and the Virgin Islands.

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First and foremost is the lack of safe drinking water. This has been a problem in all of the areas affected by these hurricanes and it continues to threaten lives.

The severity of these issues show the weaknesses in our drinking water infrastructure and how important it is for our drinking water systems to be more resilient to extreme weather and climate change.

Drinking water infrastructure has been a priority for this subcommittee this year and an issue that we have worked on together, and several of the provisions included in the committee's bipartisan drinking water bill could have helped water systems prepare for these storms.

But I think we are learning that we need to do even more and that we need to provide more resources to these affected areas, and I hope that we can continue to work together in a bipartisan manner to address the concerns we hear about today.

Superfund sites also pose serious risks when natural disasters strike. Several of these dangerous sites were damaged during this hurricane season and we are still struggling to understand the health impacts of that damage.

An extreme -- as extreme weather events become more frequent, it is even more important that we clean up Superfund sites quickly and thoroughly.

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With greater funding for Superfund cleanups we might have avoided some of the damage we have seen and, again, I hope my Republican colleagues will join me in working to address this issue as well.

And these hurricanes have also led to significant air pollution with real public health impacts. In Texas, we saw an accidental release of benzene at the Valero refinery and a dangerous series of chemical fires at the Arkema plant.

In Puerto Rico and the Virgin Islands, we continue to see dangerously high air emissions from diesel generators which could worsen dramatically as debris management efforts being in earnest.

And if we can't get the power turned back on soon, if we can't get safe drinking water out to our citizens, more Americans are going to die. This is a humanitarian crisis and we must do everything we can to fix it.

As Congress prepares the next emergency spending bill, we need to consider all these environmental concerns and do what is necessary to protect human health and the public welfare.

We can and should be doing more to increase access to safe drinking water, to secure and remediate Superfund sites, and to limit air pollution.

So I just want to thank the witnesses who traveled here today

	Committee's website as soon as it is available. [PAGE]
from	Texas, Puerto Rico, from the Virgin Islands and from Georgia,
and,	Mr. Chairman, I look forward to hearing from you. I don't
know	if any of our Democratic members want the time.
	If not, I will yield back.
	Mr. Shimkus. Gentleman yields back his time.
	We want to thank all our witnesses for being here today and
taki	ng the time to testify before the subcommittee.
	Today's witnesses will have an opportunity to give an opening
stat	ement followed by a round of questions from the members. Of
cour	se, your full statements are going to be submitted for the
reco	rd.
	Our first witness panel for today's hearing will include Mr.
Pete	r Lopez, Regional Administration, Region 2, Environmental
Prot	ection Agency; Mr. Trey Glenn, Regional Administrator, Region
4, 01	the Environmental Protection Agency; Mr. Sam Coleman, Acting
Regi	onal Administrator, Region 6, Environmental Protection
Agen	cy; and Dr. Brian Shaw, chairman of the Texas Department of
Envi	ronmental Quality.
	And with that, we will turn first to Mr. Lopez. You have
five	minutes, sir.

Welcome.

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435 STATEMENTS OF PETER LOPEZ, REGIONAL ADMINISTRATOR, U.S. 436 ENVIRONMENTAL PROTECTION AGENCY, REGION 2; TREY GLENN, REGIONAL 437 ADMINISTRATOR, U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION 4; 438 SAM COLEMAN, ACTING REGIONAL ADMINISTRATOR, U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION 6; DR. BRYAN SHAW, CHAIRMAN, TEXAS 439 440 DEPARTMENT OF ENVIRONMENTAL QUALITY

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STATEMENT OF MR. LOPEZ

Thank you, Chairman Shimkus and Chairman Walden, Mr. Lopez. Ranking Members Tonko and Pallone, and fellow Energy and Commerce Committee members.

I am Pete Lopez. I am the regional administrator for Region 2, which includes all of New York, New Jersey, the Virgin Islands, and eight federally recognized Indian nations.

It is a privilege to join you today on this important conversation and my testimony today, please understand, is a snapshot of what's happening as a result of Hurricanes Irma and Maria.

Please understand that we are very much in an emergency response mode and that the testimony we offer today is subject to change on a daily basis. So we are doing our best here.

Just to preface, in my years as a member of the state legislature, I was intensely involved in a response very similar

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458 to what's happened in the Caribbean.

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So in upstate New York in 2011, we were ravaged by Hurricane Irene and Tropical Storm Lee. Mr. Tonko and I were partners there working on this issue.

In this instance, my parents were homeless. My family was homeless. We had eight feet of water in my village. A similar situation with infrastructure, communications, power grids. The socioeconomic conditions very much the same.

If you understand New York geography, northern Appalachia. So what we found -- and this is a critical issue for the committee and for the administration -- is that the more disadvantaged the community, the more painful and slow the recovery.

So I just -- I can't understate that message and I just wanted to bring it to the committee's conscious thought.

Recently, I had a chance to travel to Puerto Rico and it was with my colleague, Deputy McCabe, who is with me today, and I was struck by the incredible destruction, and I have to tell you that the sights, the sounds, the smells were all too familiar.

And as with Irene and Lee, I also have family on the islands in the Arecibo and Camuy area. Lopez family corderos are there as well and we are very concerned about their safety.

The focus of the trip was not just to be on the ground but to connect. We met with leaders. We met with leaders of the

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territories and the Commonwealth, local officials, and our main goal was to connect with them, to identify problems and issues and really help them problem solve.

So we are very committed and I have to say the experience was both sobering but also galvanizing. I found that my colleagues on the ground are very passionate about the work they are doing and treat individuals as subjects, not objects. We are concerned about individual families, communities, and the integrity of the entire population.

As was noted by some of the introductory remarks, a major challenges remains with the power grid and here, as you can imagine, virtually everything relies on electricity.

So whether it is pollution controls at Superfund sites, drinking water and wastewater system operation, all of those things are challenged.

Our response has been working with FEMA and Army Corps to place strategically-placed generators at key locations. The challenge, of course, that it provides an alternate power source but the reliability in the long term is at risk here.

So they require fuel and even the generators themselves are subject to mechanical failure. So as we try to run around the island we are challenged with the electricity issue.

Just want to say in their defense for both FEMA and Army

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Corps, their job is unprecedented, and I don't want to draw too much of a parallel to Europe after World War II where we talk about the Marshall Plan and off script a little, but the challenges on the island are unique.

So in defense of our colleagues with FEMA and Army Corps, their job is extraordinary.

EPA has about 325 employees and contractors on the ground and in the Virgin Islands. We hope to have that number increased to about 400 in December.

In your testimony you'll see greater detail on the status of power plants -- excuse me, drinking water facilities, hazardous waste facilities, wastewater treatment, Superfund sites, hazardous debris, comingled debris, and sunken vessels. You'll see all that in front of you in your testimony.

Just as a quick note, we made great progress. We still face a number of changes -- challenges. The power -- outside of the power we have been dealing with waste -- medical waste that has been building up due to logistical limitations.

Many roads are still impassable and, as you know, weather conditions have further compromised with mudslides and flooding. That includes area flooding, chronic flooding, as well as destruction to other property.

So accessibility on the island is an ongoing challenge.

This is a preliminary, unedited transcript. The statements within may be inaccurate, incomplete, or misattributed to the speaker. A link to the final, official transcript will be posted on the Committee's website as soon as it is available. [PAGE] Humanitarian aid -- we have stepped out of our comfort zone and where we are the first responders we are bringing additional humanitarian aid with our staff as we go into the mountainous terrain. So looking to the future, quickly, we know there are unique challenges. The issue of backup power, we heard reference to what do we do for the future. Having backup power and supplies on the island is critical. Positioning those supplies in key areas, particularly with storms advancing, would be very helpful. And, again, we know there are opportunities for improvement always but we welcome the committee's engagement and thank you for this opportunity to be here with you.

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Thank you so much, Chairman.

[The prepared statement of Mr. Lopez follows:]

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Mr. Shimkus. Gentleman's time has expired.

And let me for -- just for the record ask the regional administrators to state where the headquarters is and remind our colleagues what states that they represent. We did this in the Energy Sub and I think that is just helpful to keep that all in perspective.

So with that, so Mr. Lopez, what are the states and, obviously, protectorates that you cover?

Mr. Lopez. Yes, Chairman.

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So New Jersey, New York, Puerto Rico, Virgin Islands, and eight recognized Indian nations -- tribes and we are headquartered at -- in Broadway, New York City -- 290 Broadway.

Mr. Shimkus. So let me now turn to Mr. Glenn, Region 4 administrator.

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STATEMENT OF MR. GLENN

Mr. Glenn. Good morning. Mr. Chairman and esteemed members of this committee, I am Trey Glenn, regional administrator for EPA Region 4, which comprises eight southeastern states.

That is Alabama, Florida, Georgia, Mississippi, Tennessee, North Carolina, South Carolina, and Kentucky, and we also have six federally-recognized tribes.

Thank you for the opportunity to appear before you today to discuss the impacts of Hurricane Irma and EPA's response and recovery efforts and to continue the productive discussion that we had last month with the subcommittee.

I have been on the job a little over two months now and I can honestly say that I am in awe of the caliber and expertise and dedication of the regional staff.

These environmental professionals work each day to meet EPA's mission of protecting human health and the environment and this commitment was demonstrated consistently throughout the EPA's response to the devastating hurricanes we experienced this past season.

The 2017 hurricane season was indeed unprecedented in the number and intensity of major storms that impacted the United States and the U.S. territories. The damage from these

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hurricanes is still being assessed. The recovery will continue for the foreseeable future.

EPA Region 4 is fully engaged in a number of response and recovery activities and we are working in close coordination with our federal, state, local, and tribal partners as well as businesses and local communities.

The core of our emergency response program in Region 4 consists of 28 on-the-scene coordinators and 57 additional staff within a response support corps.

Prior to landfall of these storms, I personally reached out to the environmental directors of the four states that were in the potential path of this storm to inform them of Region 4's ability to assist if needed.

We also reached out to our tribal partners that might be impacted by the storm and Florida was the only state that requested EPA assistance relative to Hurricane Irma.

We deployed our Region 4 on-scene coordinator to provide direct coordination and planning support to the state. We also provided a liaison to the FEMA regional response coordination center and deployed EPA regional senior leaders to south Florida and myself to Tallahassee.

We worked closely with EPA headquarters to issue fuel waivers and no-action assurances to assist in not only the preparation

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but also the response activities for these great storms.

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We positioned 12 field hazard assessment teams for deployment when and where needed. These teams were deployed at Florida's request to provide oil and hazardous substance response support. We further provided support to the state for orphan container assessment and recovery, vessel pollution response and mitigation, and debris management technical support.

Region 4 also assisted with water and wastewater system technical support. We coordinated with the state to monitor the status of more than 1,600 community drinking water systems and over 2,000 wastewater systems.

Concurrently, Florida also requested assistance in contacting small noncommunity drinking water systems such as schools and restaurants and the water division completed over 1,200 call-down assessments of those facilities.

Our hazardous assessment team performed field assessments at more than 200 chemical and oil storage facilities identified as priorities.

We conducted reconnaissance for pollution incidents and orphan containers and there were no significant storm-related hazardous substance or oil pollution incidents in Region 4.

We also assisted with orphan container and vessel recovery in the Florida Keys and deployed personnel to provide support to

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the state and assessment of disaster debris management sites.

Our operation in the Florida Keys continues as we speak. We have collected more than 700 orphan containers that are stored in a secure staging area for waste characterization and recycling or disposal.

Our EPA team has recovered oil and hazardous materials for more than 65 sunken or grounded vessels and moved these craft to land-based staging areas where they were transferred to the custody of the Florida Fish & Wildlife Commission.

Prior to landfall, we assessed vulnerabilities at all Superfund sites in Florida. We also deployed six teams to conduct boots-on-the-ground assessments of all national priority list sites and as a further measure we also deployed teams to assess these NPL sites in Alabama, Georgia, and South Carolina, and all we found is that sites experienced very little impact from Hurricane Irma.

Post-landfall we worked with our state partners to ascertain the status of oil storage facilities required to maintain facility response plans as well as chemical facilities required to maintain risk management plans.

Overall, there were very minimal reports of oil and hazardous substance spills that could be attributed to the storm and only one of the RMP facilities contacted reported a hazardous substance

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650 release, the source of which was very quickly mitigated.

Moving forward, we continue to meet mission assignments under the response phase and have initiated recovery with FEMA and other federal partners under the national disaster recovery framework, and under this framework EPA supports federal partners primarily on community planning and capacity building, infrastructure systems and recovery and natural and cultural resources.

We are excited to have the opportunity to work with our federal, state, tribal, and local partners on this very innovative initiative.

Again, I thank you for the opportunity to be here and share with you what I consider to be a great example of cooperative federalism to assure and restore public safety and recovery from disaster.

I look forward to answering your questions that you have. [The prepared statement of Mr. Glenn follows:]

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Mr. Shimkus. The gentleman yields back his time.

The chair now recognizes Mr. Sam Coleman, acting regional administrator of Region 6.

Sir, you are recognized.

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STATEMENT OF MR. COLEMAN

Mr. Coleman. Good morning, Mr. Chairman and fellow committee members. I am Sam Coleman, acting regional administrator for EPA Region 6, which covers Texas, New Mexico, Oklahoma, Arkansas, Louisiana, and their 66 federally-recognized tribes. We are headquartered in Dallas, Texas in downtown.

Thank you for the privilege of joining you here today for this very important conversation. I am here to speak directly about EPA's response to the devastating impacts of Hurricane Harvey in Region 6 and our associated response activities.

As we have seen in the past three months, every disaster presents unique challenges. Hurricane Harvey hit Corpus Christi as a category four hurricane, then lingered over the Texas Gulf Coast, dropping more than 50 inches of rain in Harris and the surrounding counties, and this impacted over 7 million people.

EPA worked with Texas and local officials to assess more than 2,200 drinking water systems and more the 1,700 wastewater systems.

We retrieved over 950 loose containers and, according to FEMA, we worked with the state to make sure that over 20 million cubic yards so far of debris has been properly disposed of.

At one point, the Texas commissioner of environmental

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quality had over 500 people working on the response and EPA had over 250 people assisting the state in those response activities.

One of the most noteworthy aspects of the response to Hurricane Harvey was the positive and collaborative relationship between EPA and the state of Texas.

Because we worked very closely with the state agencies and the governor's office, our collective strength of our efforts were greater than the sum.

By augmenting state resources where needed and providing some specialized monitoring capabilities, together we were able to address many challenges prevented by Hurricane Harvey in a timely manner.

After my 29 years of working at EPA and experiencing events following Hurricane Katrina and the Deepwater Horizon oil spill, I have learned a few key lessons regarding the response activities to assure success.

I am going to go over a few of those. First is exercises

-- our federal agency's plan for such catastrophic events by

conducting exercises to prepare. It is very apparent that these

practices lead us to discover our weaknesses and to have time to

correct those efficiencies before the real emergency occurs.

It is difficult to prepare for such an event as devastating as Hurricane Harvey. However, the state of Texas was as well

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prepared as I've seen and integrations of our organizations was exceptional.

Second is prior coordination. Because EPA has open communication and a longstanding cooperative relationship with our state counterparts and other emergency response agencies, it clears the path for success that benefits the citizens that are impacted by a disaster.

When a storm is imminent, EPA begins the coordination efforts before landfall. As soon as the storm passes, we have teams that are standing by to begin the assessment of drinking water and wastewater systems to begin evaluating the environmental integrity of impacted businesses, to begin investigating citizen complaints, and to respond to any reported spills or other damaged areas as well as sharing key information with the public.

Next is the experienced staff. An effective response infrastructure includes experienced first responders who are able to address unforeseen circumstances both swiftly and effectively.

Staff development during the preplanning time is of grave importance and should not be underestimated. Experienced responders are the first boots on the ground and they provide the most efficient assistance to communities.

And then, finally, is having the right equipment. EPA employed assets during Hurricane Harvey response to assist the

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responders that were not available elsewhere. EPA often responds to reports of environmental impacts from air emissions or from other plumes that may be dangerous to a community.

In response to these complaints and odors and fumes during Hurricane Harvey, EPA deployed a TAGA bus. TAGA stands for the trace atmospheric gas analyzer.

This is a mobile pollution detection vehicle that is able to provide air quality results quickly by collecting constant real-time data of outdoor air quality.

The TAGA bus monitored ambient air in the vicinity of approximately 25 facilities and adjacent neighborhoods and during that time they covered over 640 miles going back and forth in those communities.

The results of this we were able to detect actionable emissions to work -- then to work with those affected facilities and to work with the state to make sure that they were properly addressed.

There was also widespread coverage of the fires at the Arkema facility in Crosby, Texas. That facility housed volatile chemicals that required refrigeration to prevent them from self-igniting.

When the facility lost power, the conditions deteriorated at the facility, which required an evacuation of the facility and

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surrounding areas. Ultimately, there was a series of fires that were spontaneous combustion from those materials stored at the site.

EPA used the ASPECT aircraft for air sampling above the facility and in the nearby surrounding areas. ASPECT stands for the airborne spectral photometric environmental collection technology.

And I know that is a mouthful but, basically, it is an airplane that EPA rents that is packed full of EPA-owned monitoring equipment so that we can look into the plume to determine if there are harmful levels of chemicals or if there is any danger either downwind or in the communities surrounding the plant.

The ASPECT flew 28 flights over 112 hours -- 28 flights and over 112 hours, covering miles of pipeline. We looked at 134 risk management facilities and 456 drinking water plants and also 105 wastewater facilities in support of the Hurricane Harvey response.

The data was invaluable and assessed the risk quickly in responding appropriately to the emergency and the technology was not available through any other parties involved.

The third asset that we used was a mobile laboratory called PHILIS. PHILIS stands for the portable high through-put

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788 | integrated laboratory identification system.

The PHILIS lab is a mobile laboratory that we deployed in Houston that allowed us to get 48-hour turnaround on volatile and semi-volatile samples.

This allowed us to quickly assess the conditions at all of the Superfund sites and also any other samples that we needed a quick turnaround.

If EPA did not have access to these tools, our response and the dissemination of information to the public would not have been as informative and robust. I believe that these EPA assets are critical to effective preparedness and response.

EPA remains activated as an agency continues to respond to Hurricanes Maria and Irma. The agency taps resources from our sister regions during these times of great need.

I have seen the agency continue to grow in our capabilities, learn from each response and apply lessons learned as we face new challenges.

We are able to make more data available to the public. For example, we use story boards as we presented this information to the public so that they could understand what each sample meant and how it impacted them personally.

EPA will continue to develop more methods and improve our responses by working with our state, local, and other federal

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[PAGE] agency partners.

While the response has its own unique challenges, we want to remain flexible to address the individual needs. I am very proud of the EPA and the other responders when called to duty in these times of great need.

I am happy to answer any questions about the great work we've done and look forward to continuing to serve.

Thank you.

[The prepared statement of Mr. Coleman follows:]

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822 Mr. Shimkus. Thank you.

Now, last but not least is Dr. Shaw, chairman of the Texas Department of Environmental Quality. You have five minutes, sir.

Welcome.

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826 | STATEMENT OF MR. SHAW

Mr. Shaw. Good morning. Thank you, Chairman Shimkus, Chairman Walden, and Ranking Member Tonko and members of the committee. It is a pleasure to be here.

For the record, my name is Bryan Shaw. I am the chairman of the Texas Commission on Environmental Quality and I am happy to discuss our response in recovery efforts related to Hurricane Harvey.

First, my agency's primary mission is to protect the public health and natural resources by ensuring that the air and water and waste are clean and disposed of safely.

This is a critical part of what we work to is fulfilling that mission in the aftermath of a disaster such as Hurricane Harvey.

While we recognize the many challenges that we face and the severity of the -- of the storm that we had, the key to making the response as successful as it was you have heard demonstrated through the cooperative nature that we have experienced both with our federal allies as well as other state and federal agencies in responding to the hurricane.

As was mentioned by Mr. Coleman, TCEQ deployed about 500 people dedicated to the Hurricane Harvey response. The 250 or so folks that worked from EPA to work hand in hand with us were

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critical to addressing one of the major issues we face and that is communication.

At the time that the storm rolls through it is very challenging to have the adequate communication and get information in a timely manner because, quite frankly, the local elected officials aren't always as prepared for a hurricane as we might want them to be because typically they are spaced out far enough that this is, in most cases, their first experience at dealing with a hurricane and when you have one of this magnitude it becomes even more critical in having a cooperative relationship between the state and federal agencies that respond.

It is critical both to providing that information as well as reassuring those local officials where help is and help is on the way.

This cooperation, I think, clearly demonstrates how well state and federal agencies can work together. We tend to work very well with EPA in previous natural disaster response but never better than we worked in this response and I think considering the unprecedented nature of the severity of the storm and, quite frankly, the fact that this storm sort of parked over Texas and dumped rain continually, it is — if you look at the tragic losses we had but in hindsight considering the severity of the storm, the state fared very well and that is attributable to the prior

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planning, it is attributable to the cooperative relationship we had amongst our different state agencies and, quite frankly, it is attributable to the resiliency and the good neighbors that we have in our state of Texas that we are blessed with that come to the aid of their -- of their neighbor in time of crisis.

I think this fits very well into the Cooperative Federalism 2.0 effort that is underway and I think that is -- I applaud this committee for looking at finding ways to be able to ensure that the state and federal agencies are working together.

The Environmental Council of the States has a process underway called Cooperative Federalism 2.0 which is trying to incentivize and encourage us moving to that relationship that was demonstrated, and so I am very much encouraged by that.

I will talk briefly because I know we were running short on time from the standpoint of my allocated time but I want to touch on some of the issues that are ongoing.

Obviously, debris management is one of those issues that continues to be a challenge. This is often what I refer to as the slow tragedy associated with an event like this.

You see some of that initially when you see the debris from what is taken out through wind, the tornadoes associated with a hurricane, as well as the surge -- the storm surge.

But oftentimes the flood damage you don't see initially

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because those houses seem to be unaffected until you start seeing the residents return back and removing the debris from inside of the houses, getting the drywall out, moving it to the curbs and to the temporary sites.

And so it is critical that we move quickly to be able to help that happen because having those materials remain indoors leads to mold and other types of biological contamination that can be poor for health as well as making it very difficult for communities to rebuild.

We move it quickly to the curb but you need to move it from there quickly because you have vector issues -- mice, rats, other things -- that can be there -- mosquitoes breeding. And so we want to make sure that we have that process moving along.

And then from the temporary site getting it into a landfill and making sure that we are providing for ultimately, environmental and health protections become very critical.

We are working probably most of our time at this point dealing with the ongoing tragedies and needs related to disposing of debris, working to quickly identify the temporary sites, ensure that we are working with those local officials not just to make sure that all the bureaucratic I's are dotted and T's are crossed but in making sure that we are both safe, protective, and ensuring that we don't have issues that will prevent them from getting

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reimbursement from those recovery efforts because those communities have already been hard hit from the loss of their tax base, their houses, and their businesses. And so we work very diligently to ensure that moves quickly.

So we are continuing to have success there but we will continue to have those calls that come as judges and mayors realize that the removal process is too slow and we work and continue to provide resources to help them both from a technical standpoint as well as, when we can, providing physical labor and the expertise on the ground.

Air monitoring -- we have heard some discussion from Mr. Coleman so I won't go into a lot of detail other than to point out that we have a plan in place, our -- I call it our common sense approach where we make sure that prior to a storm's landfall we take down equipment that is going to likely be damaged or destroyed in a hurricane and then very quickly bring it back up.

That takes some time, especially when, in many cases, we had to wait until we had power restored to an area to be able to get air monitors in place.

We relied very heavily on our federal partners to be able to do sampling as we had case by case needs as well as deploying monitors that we could bring in to assess plumes and other issues associated with potential emissions from facilities.

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I will quickly wrap with drinking water, wastewater issues. As was mentioned, we had a couple thousand drinking water systems that were in the path of the storm. We still have two of those that are inoperable. They are small systems and arrangements have been made to allow for them to have water brought in so those residents are getting their needs served.

But we still have 24 systems that are under boil water notice, some of that because of damage to the system and some of that because, frankly, they're still adjusting to the source water changes associated with the storm.

Wastewater and sewage, we still have three of those systems that are inoperable compared to the 40 at the height of the process. So it does take a good bit of time.

I will close with talking about our hazmat, and we do work cooperatively but we take the lead with regard to identifying containers that may be washed away or moved away during the storm.

And to date, we've had about almost 1,200 of those containers that have been located and properly disposed of as well as dealing with the spills associated with the storm.

So you can see that there is a broad range of issues that have to be addressed and working cooperatively allows us the best chance of being most responsive to our citizens.

And with that, I will thank you for the opportunity to visit

This is a preliminary, unedited transcript. The statements within may be inaccurate, incomplete, or misattributed to the speaker. A link to the final, official transcript will be posted on the Committee's website as soon as it is available. [PAGE] 964 with you about this issue. We do have many resources available 965 on our website and I am happy to provide those web links as needed. 966 Those are very helpful both in informing the public as well as elected officials about resources that are available to them. 967 968 I am happy to answer questions. Thank you, sir. [The prepared statement of Mr. Shaw follows:] 969 970 **************************** 971

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972	Mr. Shimkus. The gentleman's time is expired.
973	And before I start with the opening question, I want to
974	recognize Jenniffer Gonzalez, the resident commissioner from
975	Puerto Rico.
976	She's here at a good time to hear the opening statements but
977	also, as I go to my first round of questioning, the first one is
978	going to go to Mr. Lopez.
979	So I recognize myself for five minutes for questions. Mr.
980	Lopez, there have been a number of press reports about people who
981	are without clean drinking water, drinking from a well on a
982	Superfund site in Dorado, Puerto Rico.
983	Can you explain the situation there and whether it has been
984	resolved?
985	Mr. Lopez. Certainly, Chairman, and thank you for that
986	question.
987	So, again, of course, there was a lot of attention to early
988	concerns of the individuals drinking from the wells. Those
989	reports were incorrect.
990	So, in essence, there has been some understandable confusion
991	with the way the infrastructure is designed and operable in that
992	area.
993	So wells in question are sealed. They are not accessible.
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Water has been made accessible through spigots at those well sites

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that are part of the super aquifer tied to process infrastructure.

When we first learned about the concern, our first response, of course, was humanitarian and we brought bottled water and had Army Corps bring water buffaloes to the sites because the main concern was we want to protect human health and safety, take them away from sites where we had any question, and make sure people had potable water.

From there we engaged in immediate sampling and from the results of the sampling we found chlorine residual from those spigots. Certainly, wells are not prone to have chlorine in them inherently and so our initial deduction was that that was treated water.

We have gone forward to do additional sampling and are doing full spectrum analysis. Thus far, our results reaffirm and process also reaffirm that along with the Department of Health from Puerto Rico that that is part of process water supply. They are not from the contaminated wells.

Mr. Shimkus. Are there any other places on the island where this issue may be an issue?

Mr. Lopez. Not to our knowledge and, again, the concern -- and just to highlight, Chairman, the concern with the Superfund site -- and this is part of the challenges -- Superfund site doesn't mean that every water source within the designated area

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What it means in this case with the Dorado site we identified a target area -- we, at EPA -- just to monitor. So where sites were known to have contamination those sites have been locked down. Other sites we continue to test -- I say we, the Puerto Rico Department of Health -- PRASA -- on a regular basis to make sure that those supplies remain potable and within Safe Drinking Water Act thresholds.

Mr. Shimkus. Was the Puerto Rican water utility the entity distributing water at the Dorado site?

Mr. Lopez. The Puerto Rico Well Authority -- PRASA -- was not literally distributing the water. The areas in question were fenced and signed. There are spigots there and the sites were entered into and PRASA was not knowingly willingly distributing.

But we -- again, our main concern there was to make sure that the water was safe and that is why we brought temporary water until we could ascertain the status of the true supply.

Mr. Shimkus. So in your written statement, Mr. Lopez, when you -- in your written testimony you note that 20 of the 115 drinking water plants are out of -- out of service. What is -- what are you doing to remedy the situation about people not having access to potable water in Puerto Rico?

Mr. Lopez. Well, our challenge, of course, Chairman, is we

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assess. So we determine where there are deficiencies, whether it be collapse of trunk sewers, whether power be out, and then we work with Army Corps, which is mission assigned to work with PRASA to make the repairs.

So funding is provided through the Stafford Act to help make necessary improvements. We continue to help provide advisories to the population and, again, we are working with our partners to make necessary repairs as quickly as possible.

Mr. Shimkus. Let me, in my last minute and a half, turn to Mr. Shaw, or Dr. Shaw. My sister-in-law move out of Houston right before the storm.

But she has a lot of friends back there and she visited over the weekend and it raises the point about waste management that you were referring to.

On her return she showed a picture of her friend's house. About two and a half to three feet of drywall had been ripped out. I mean, still, the house will be -- take a year probably or I don't know how long to get it. But so that -- so when we see storm damage, which we have in tornado season, you see the initial pile of refuse on the streets. But then over time you're going to see the refuse from being torn out. They're probably going to be in dumpsters and they're going to be hauled someplace.

So the question is, is there sufficient land -- landfill

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1064 | capacity with this hurricane debris?

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Mr. Shaw. The answer -- the short answer is yes. And you are right, part of that process is moving from the house to the curb. Usually there is about three passes of removing from the curb as well. So it is sort of a cyclical process.

We looked at it very closely and initially estimates were quite high what the debris might be.

The issue is we have enough capacity in those landfills in the areas. The real challenges have been twofold. One, does it reduce the length of life of that landfill, which is obvious.

The second part of that is sometimes those landfills, because they build them out in cells, they may not have a cell that is built out ready to receive all that debris, and so in some cases they may have to exceed their permitted height and we have a process whereby they can apply to make that happen on an emergency basis.

What will happen is following the passing of the storm they will either have to come in and remove that extra cap or they will have to go through a permit amendment to get approval to leave that landfill at a height that was higher than was permitted and then they can build out another cell, if you will, and move that waste or at least begin taking new waste.

Mr. Shimkus. I am way over my time and I thank you for the

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1087 | answer.

The chair now recognizes the ranking member, Mr. Tonko, for five minutes.

Mr. Tonko. Thank you, Mr. Chair.

Administrator Lopez, as I mentioned earlier, the committee has heard alarming reports of people without access to safe drinking water in Puerto Rico and the United States Virgin Islands, and I heard the exchange with the chair here just moments ago.

Let's get a little deeper into the drinking water and wastewater system issue. Many remain inoperable. Can you help us understand what are the sources of those problems of inoperation?

Mr. Lopez. Much of the problem lies with damaged sewer -- excuse me, water mains. We have damaged distribution lines.

Power is a considerable issue.

We, again, are working on generators but those generators do not always remain operable. So access is an issue. We have had plants that, because of mudslides or rain, river action, we have had them -- access to them denied.

So at this point, 85 percent of the PRASA system users have water and PRASA represents about 97 percent of all the water supply to the island.

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There are additional water supply sources -- non-PRASA systems, very small sources. There are very -- there are about 237 independent water treatment systems throughout the mountains.

We are working with mission assignment, with nongovernmental operations to do work there. In some of those cases we are, again, trying to get those systems back and running. But power, in some case physical damage, in some case access. We also have debris issues. In some case, intakes are clogged with debris and that has been a challenge for some of our operators.

Mr. Tonko. And just what percent or whatever expression we can get from you is concerning electricity failure?

Mr. Lopez. Oh, my gosh, I have -- I have some detail. So I can go through -- I have -- I have a number. I will just run through -- I have a list. Arecibo alternate power unit out of service. Esperanza, alternate power service out of Muñiz. We have quite a few. Most of it is power units.

We do have waterline pipes broken. We do have some cases of water supply -- raw water supply clogged. But much of it is power and, again, we are using generators and other means to try to activate those systems. Some systems were flooded and they had to be reassessed even before power could be fully restored.

Mr. Tonko. And you had mentioned the infrastructure failure. What about source water contamination as an issue? Is

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1133 | that --

Mr. Lopez. We are -- of course, we are very concerned about it and I used a phrase Ms. Colon would understand, agua es vida -- water is life.

So whether it be water for drinking, water for bathing, water for washing your clothes, water for any purpose, we are all very concerned.

We have been -- in terms of the contamination of water our role has been, first, direct resources to restore water and systems to be operable. That's the main goal.

With individual homes and families we are working with the CDC, Puerto Rico Department of Health, and others to provide advisories. So boiled water advisories are in effect, have been in effect.

We are also warning people to be -- to avoid using these supplies for potable purposes. We have worked with the CDC to provide alternate disinfection where possible -- chlorine tablets and other alternate disinfection. So we are taking --

Mr. Tonko. Oh, go ahead.

Mr. Lopez. As broadly as we can we are trying to respond. But the challenge is we can't control individual human behavior and people need water. So our main goal is get water to them as quickly as we can -- potable.

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Mr. Tonko. Peter, you had mentioned PRASA and with those independent systems -- those beyond PRASA -- are they continuing to struggle to provide safe drinking water?

Mr. Lopez. They are. We are working with them and, again, it is case by case. Just mind you that a number of the systems are mountainous and access to them continues to be an issue.

So we are working on assignment to get to them. But at this point, we had -- we have assessed -- bear with me a second. Just going to pull up my notes here on non-PRASA. There are 237 independent community systems and we have assessed them all. But getting them all operational is a challenge.

Mr. Tonko. And of those 237, which are operating?

Mr. Lopez. Let me -- bear with me just a second. About 170 of the 237 are operational.

Mr. Tonko. Okay. Thank you.

And is EPA testing water quality at small water systems?

Mr. Lopez. We do. Well, the Department of Health -- let me say this -- the Department of Health for Puerto Rico is the authority. So our sampling is really not something we do as a norm.

We did sample in the Dorado case where there were concerns about drinking from contaminated wells and there we wanted to do rear guard action for the Puerto Rico Department of Health.

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1179 But Puerto Rico Department of Health maintains primacy with 1180 those -- with those sites. 1181 Mr. Tonko. Thank you. 1182 Mr. Chair, I yield back. 1183 Mr. Shimkus. Gentleman yields back his time. 1184 Chair now recognizes the gentleman -- the chairman of the 1185 full committee, Mr. Walden, for five minutes. 1186 The Chairman. And I thank the chairman and I thank, again, 1187 our witnesses for your testimony on all these issues our citizens 1188 face. 1189 I know, Mr. Lopez, you've talked a lot about the drinking 1190 water and we know when the power goes off the pumps don't run and 1191 purification doesn't work unless you get generators and all that. 1192 But I would like to move beyond that and ask about the ability 1193 to clean up Superfund sites. How is that being impacted along 1194 the way here? 1195 So, Chairman, the Superfund sites were assessed Mr. Lopez. -- they have been assessed routinely. They were assessed before 1196 1197 the storm events -- Irma. They were assessed after Irma. 1198 have been assessed after Maria. And much of those sites really are groundwater 1199 contamination. So they were not really moved by the storm. 1200 The 1201 issue for the storm and where there was damage were in terms of

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fencing and also pump and treat systems, which required power.
So in those cases, we worked to restore those functions.
That's what we've been working to do and the in terms of damage
The Chairman. How
Mr. Lopez. I am sorry, sir.
The Chairman. How far along are you on that the Superfund
site protection?
Mr. Lopez. To my to my knowledge, that is things are
locked down.
The Chairman. Okay.
Mr. Lopez. So if we've seen additional concerns for
example, we found an orphan container that was removed but we
are to lock those sites down, Chairman.
The Chairman. Mm-hmm. All right. Is that true for the
other sites, too? I mean, are we talking about issues in Houston
or Florida? Are there any Superfund issues we need to be aware
of?
Mr. Coleman. With regards to Texas, there were 34 federal
Superfund sites in the state of Texas. We have done the
assessment of all. There was one site that we listed, the San
Jacinto Waste Pits site, that did require some additional
follow-up.

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We have been working with the responsible parties. They have plans in place to both do repairs to that site and then there is some additional repairs on the river side of the site where there was scouring that the PRPs are in the process of placing some additional rock to stabilize that portion of the site. That is ongoing.

The Chairman. All right.

Mr. Shaw. And I would just add there is -- I believe there are 17 state Superfund sites and at those we worked very closely with EPA on both the federal and the state and secured the sites.

All those sites we're finding there was a release potentially from one that was a sheen that we saw on water and that has been dealt with. So but no offsite concerns at this point.

Everything is locked down.

The Chairman. So can you call give us assurance then that when it comes to the issue of Superfund sites we are not contamination into drinking water, that these sites are secured best they can be, that you've got this under control?

Mr. Shaw. Yes, sir.

Mr. Coleman. Yes, sir.

Mr. Glenn. Yes, sir.

Mr. Lopez. Yes, sir.

The Chairman. Perfect. That's good news. I think that

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had a lot of us worried, including, I am sure, all of you. You know, that is the most dangerous things we face.

Beyond that, you know, as we -- as we keep hearing about the power going on and going off in Puerto Rico and we knew they had a bad grid to begin with, what should we be worried about here?

What can we do to help here on that issue of power and how much of this is really the responsibility of the grid owner and the power provider in Puerto Rico?

Well, Chairman, again, I think part of the challenge is, as I mentioned in the my testimony, the system itself is old.

The Chairman. Right.

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Mr. Lopez. And we heard testimony from Army Corps with the infrastructure -- Transportation Infrastructure Committee suggesting that their average age of power plants are much younger than Puerto Rico's.

So we are dealing with a system that was old and challenged to begin with and I think part of our goal is, one, how do we put power back on but the long-term and --

The Chairman. Keep it on.

-- and for Señora Colon [Speaking foreign language] -- my family has that name as well -- how do we make sure that it is sustainable and survivable for future events.

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1271 | that is an open question.

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The Chairman. And from what you have seen on the ground, again, on Puerto Rico or the Virgin Islands especially, are there — are there enough crews? Are the various agencies communicating well with each other?

Are there gaps in that communication we should be aware of?

It is always hard in these situations, I know, but --

Mr. Lopez. So, Chairman, we work under a command and control function. We work with our incident commanders. There's very close communication with FEMA, Army Corps, our other partners.

Our regions have been providing support where we signal. We have been very thankful to my colleagues here for their staff support as well.

I would say that the communications are strong. The challenge is making sure that we can get the resources when we need them.

The other challenge which we have been working at is also making sure that we are working with the local authorities and respecting their process — their decision making capability, and that is — that means in some cases we have to put things in front of them and give them time, recognizing — and this is the challenge for those in the situation — if you have been in a storm event and you are under constant duress, we are rotating crews

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in and out routinely -
The Chairman. The

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The Chairman. They are there --

Mr. Lopez. -- they are working under constant duress. So part of our challenge is helping support their decision making and give them time and support they need so they can be at peace with mission objectives and corrective action.

The Chairman. Okay. Did you have something you wanted to -- no? Okay.

My time has expired. Mr. Chairman, thank you all for the great work you and your teams and the teams from all the agencies are doing the best they can in these circumstances and we appreciate that.

But, again, we want to know if there is a problem that you need help on or they need help on, and I know that our resident commissioner has been terrific at bringing us all up to speed and keeping us up to speed.

So with that, Mr. Chairman, I yield back.

Mr. Shimkus. Gentleman's time has expired.

The chair now recognizes the ranking member of the full committee, Mr. Pallone, for five minutes.

Mr. Pallone. Thank you, Mr. Chairman.

Five years ago, Superstorm Sandy caused major damage to my congressional district including Superfund sites and water

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treatment facilities and we have seen even more of that with the latest hurricanes.

So I would like to focus briefly on the importance of investing and making our environmental infrastructure more resilient.

In the aftermath of Sandy, I saw the importance of this firsthand when the storm badly damaged the Bay Shore Regional Sewage Authority, which treats the wastewater from a number of the towns in my district, and the authority completed a \$28 million project to rebuild the plant and make it more resilient to future storms.

But I don't think we should have to wait for disasters to make our infrastructure more resilient. So let me ask Mr. Lopez, what can EPA do to help communities in Puerto Rico and the Virgin Islands improve their drinking water and wastewater infrastructure to make it more resilient?

Mr. Lopez. Thank you. Thank you, Chairman.

So part of the challenge is, again, part of it is the time we are in. Under the Stafford Act, we are in response. So this is an emergency. So it is my understanding that Stafford Act funding means you build in kind -- you replace in kind.

So the issue is, and this goes back to you as our partner and our colleagues here, where do we signal programmatic and

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1340 | funding flexibility to allow other sorts of investment.

Now, just as an example, with the nongovernmental allies that we have had with the nonprocess sites, we have been able to put solar systems in a few isolated incidents.

Mr. Pallone. All right.

Well, let me ask you this. Do you think that we need to invest more federal dollars though in environmental infrastructure in general as part of this recovery or is it just your concern that we are not focusing on long term?

Mr. Lopez. So I am a little bit above my pay grade,
Congressman, but bear with me. So I am going to speak from the
heart.

So, effectively, it is a function of targeting dollars -- making sure dollars are reachable and also ensuring that the broad purposes can be served.

So, again, we have many various funding streams. It is not generally one funding stream, like my colleague, Mr. Cochran knows.

Mr. Pallone. Okay.

Mr. Lopez. So to answer your question, I think part of our challenge here would be to look at funding streams, look at resources, ensure that we have maximum flexibility in their use.

Part of this --

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Mr. Pallone. Okay. And particularly the emphasis on looking at long-term rather than just short-term to fix things.

All right. I am just rushing through because I wanted to ask a question about the Superfund, too. As you know, Hurricane Harvey damaged a lot of Superfund sites in Texas including one site where hazardous dioxins were exposed and I think we should be doing more to limit the impact of severe weather on Superfund sites.

So let me ask Mr. Coleman. You only briefly mentioned Superfund. But is it -- it is a priority, I think, for a lot of communities. Do you agree that more resources for Superfund cleanups would mean few contaminated sites vulnerable to extreme weather?

Mr. Coleman. So the site in Texas that you mentioned -- the San Jacinto Waste Pits site, is a site that is under EPA oversight but there are accountable responsible parties who are both responsible for the day to day security of the site as well as --

Mr. Pallone. But my question is do you agree that more resources for Superfund cleanup would mean fewer contaminated sites vulnerable to extreme weather? You can just say yes or no. I mean, I just want to know if you think money or resources would make a difference.

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Mr. Coleman. Well, we are working with the funds that are appropriated to make sure that those sites that require federal funding are cleaned up as expeditiously as possible.

Mr. Pallone. All right. All right.

Let me go back to Mr. Lopez. We heard troubling reports out of Puerto Rico, citizens drawing drinking water from a well on an unsecured Superfund site. What more could EPA do to protect public health from exposures to toxic sites after severe weather strikes?

Mr. Lopez. So, Chairman, as I was mentioning to your colleagues, the contamination in the groundwater was really not affected by the storms, to our knowledge.

The issue was making sure that the mitigation methods that were in place were functioning as intended -- fencing, pump and treat seat systems.

The -- in Dorado, the wells in question were not accessible. Power supplies had been disabled. There was no ability to pull water from the wells. So the source of water, again, was from the -- from PRASA, from the public --

Mr. Pallone. Do you think that we could do more to protect
-- could EPA do more to protect public health from exposure to
toxic sites after severe weather strikes or, again, this is just
simply fixing damage?

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1409	I mean, the concern I have is, again, what you said that
1410	maybe we are just simply fixing damaged fences, blocking access
1411	to these sites. I mean, this goes back maybe to what you were
1412	saying before. But just
1413	Mr. Lopez. So at those sites the wells were not accessible
1414	of for public access, again, the groundwater contamination was
1415	there before the storm and remains and that is something we
1416	continue to work on.
1417	So our challenge is to mitigate again, track any plumes,
1418	for example, in the Dorado site. We are tracking a plume so we
1419	test water supplies. We test vigilance is really the issue
1420	here.
1421	We remain vigilant and we certainly understand the
1422	importance of making sure that we are staying within Safe Drinking
1423	Water Act standards, keeping people under those threshold with
1424	their water supply.
1425	Mr. Pallone. All right.
1426	Mr. Lopez. So monitoring, continue testing those are
1427	and then mitigation remain the tools available to us.
1428	Mr. Pallone. All right. Thanks a lot.
1429	Mr. Shimkus. Gentleman's time expired.
1430	The chair now recognizes the vice chairman of the
1431	subcommittee, Mr. McKinley, for five minutes.

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Mr. McKinley. Thank you, Mr. Chairman, and thank you again for having this hearing on this.

Let me skip from Region 2, 4, and 6 and move to Region 3 out of Philadelphia. There's an area that -- the flooding that had taken place the hurricanes had an impact not only in Texas and Florida and Louisiana, along the coast, but it had a demonstrative effect in north central West Virginia, in eastern Ohio, northern West Virginia, western Maryland, western Pennsylvania in the streams.

The water that -- the amount of water that came down during that period of time we washed out -- our streams were full of debris, full of items that should have been dredged, and as a result we had water lines lost, exposed.

We had septic systems that were destroyed. We had water pumping stations that went down because of this. So I am just curious -- and we had loss of life in north central West Virginia as a result of this.

So it is not just happening with hurricanes in the coastal areas that we are talking about -- the ravaging that took place. It has had an effect on the central part of this country as well.

So my question, when they try to get the dredging of these streams so that they can mitigate the potential loss, often we are hearing from the region -- the EPA is they won't give permits.

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They go through an extended permitting period. Either that, or FEMA steps in the way or an environmental group steps in the way.

So if we are going to mitigate the potential loss and the environmental impact, what would you suggest that we do in other areas to clean up our streams if the EPA continues to stand in the way of dredging? Any one of you?

Mr. Lopez. Yes. Yes, sir, I can help with that and, again, it is funny how life brings you -- moves you forward.

So with Irene and Lee in northern Appalachia -- again, we are just north of you. I had Southern Tier. I had the Susquehanna River Valley. We had the Catskill region.

To answer your question, part of our challenge is, is as we get into these streams we have to be very careful because any impact upstream can have an impact downstream.

In my home community, the urgent response was to just dig into streams and we wound up channelizing our streams. Water began flowing faster and destabilizing the stream banks and emergency evacuation routes were compromised.

Short story is as we get in, we are working with NRCS, others
-- DEC and New York State -- to try to look at it from a watershed basis.

Some of it means restoring flood plains. Some of it means

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restoring the natural flow of the streams. Getting in to clear debris can be an ongoing mission but we also have to recognize that we have to give room for streams almost like a living organism to get rid of energy and to have a place --

Mr. McKinley. I understand.

Mr. Lopez. So --

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Mr. McKinley. But the EPA and FEMA are standing in the way of permitting to do that. We have got to -- we had -- at Follansbee, West Virginia, they have had a -- their stream is eight feet of gravel and sand have built up in that so as a result of this they had no capability of absorbing the amount of water that came down and homes were washed out as a results of this.

Mr. Lopez. So -- so --

Mr. McKinley. So I am saying --

Mr. Lopez. You know, Chairman, respectively, I have Region 2 so I am your neighbor in New York, in particular, similar topography.

I can only tell you that the partnership there has been with the state agent. DEC has been the agent in charge. EPA has worked --

Mr. McKinley. The state keeps blaming the federal What -- where are we supposed to get through this government. so that we can mitigate the potential loss?

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We can eliminate a lot of these damages and the environmental impact if we could clean our streams out. But they -- other people keep blaming Region 3.

Is there something you can suggest? Is it happening in other areas that you're seeing a more successful relationship to dredge these --

Mr. Lopez. Congressman, if I may, what I'd like to do with your permission is take your information back to our headquarters

Mr. McKinley. Please.

Mr. Lopez. -- see if we could research this issue for you.

Mr. McKinley. Please. The other has to do also when Rick Perry say said that hitting a Category 4 which had such devastating effect on the petrochemical industry and has been suggesting that we build a secondary facility in Appalachia with a ethane storage facility in the north central eastern Ohio and western Pennsylvania. As a result, maybe we wouldn't have such loss of product if we had something other.

So I really appreciate the fact that the commissioner and Pruitt all are working together to try to find a secondary source on this -- a supply.

I think it would eliminate some problem because we know that when that hit -- Hurricane Harvey hit, out of the 23 cracker

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1524 | facilities in the -- in the Houston area 17 went down.

So as a result, it had that ripple effect all across the country that people couldn't get resident supplies and companies had to reduce their workforce as a result of it.

So I am hoping that we can continue to learn from this problem that has occurred and how we can have a secondary source, and we are not going to have both environmental impact and economic impact.

I yield back.

Mr. Shimkus. Gentleman's time has expired.

The chair now recognizes the gentleman from California, Mr. Peters, for five minutes.

Mr. Peters. Thank you, Mr. Chairman, and thanks to the witnesses for being here.

You know, I think -- I spend a lot of time when I see these awful disasters come they -- they, obviously, cause a lot of dislocation and tragedy.

They also cost us a ton of money at the federal government for cleanup, and I think a lot about what you might have learned as part of the cleanup that you might advise us to invest in ahead of time.

So what are the things that maybe you've observed that you think, boy, if the federal government had invested in this

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beforehand we would have saved a lot of money in the long run.

Anything in general that you gentleman saw? Maybe Dr. Shaw?

Mr. Shaw. Yes. Thank you.

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Certainly, that is part of what we -- we have an ongoing process of trying to do the lessons learned and to that end we are in our second week of our after action review to learn the right lessons from this.

Part of what I think addresses your question is the fact that we have -- the governor has put together a commission to rebuild Texas and part of what we are looking at there is identifying what are those resilience issues, opportunities, and needs both to build back infrastructure but also what do you do -- what is that next step you would do if you had additional funds or funds --

Mr. Peters. Anything in particular in mind right now?

Mr. Shaw. There are things like several -- sometimes it is a reservoir -- excuse me, a retention systems. We have dykes and levy systems that have been proposed and often are waiting on funding.

Mr. Peters. Okay.

Mr. Shaw. And so there are projects that had been approved and are just waiting on funding that would help to mitigate some of those flood issues.

So those sorts of things are obvious and so we are trying

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to put together a better holistic package of what it looks like statewide but especially in the Hurricane Harvey impacted area.

Mr. Peters. That seems wise to me.

Before I leave you, Dr. Shaw, have you had -- we have had a lot of -- we have had issues with massive sewer spills that have flowed and come from Tijuana up into San Diego, which I represent.

I wanted to see if you've had any experience in dealing with clean water and health issues with the CDC or FDA in connection with the issues you face in Texas.

Mr. Shaw. Not specifically.

Mr. Peters. How has that been?

Not specifically CDC and FDA. We partner, obviously, with EPA very closely on our -- on our water quality issues but I've not had experiences with CDC and FDA on those issues.

Mr. Peters. Okav.

Maybe, Mr. Lopez, if you had any general responses to that question about Puerto Rico. I had a specific one, but any general thoughts about what resiliency the federal government might be involved in building in so that we don't face the quantity of destruction that we saw this time next the wastewater --

Mr. Lopez. Thank you, Congressman.

And, again, we mentioned a little bit about flexibility with

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funding	to	ensur	e that	as	rebuild	loccurs	or	as	we	move	forward,

funding to ensure that as rebuild occurs or as we move forward, because recognize that once we leave the response mode we head into recovery and that is going to be a very long conversation.

And for any of my colleagues here we know that that is not just months. That may be years, and that may include additional rebuilding, reinvestment, flexibility of funding.

The other thing that I was discussing with my colleague -- my deputy, Ms. McCabe -- is the issue of, in that case, having resources available or prepositioned, having --

Mr. Peters. Right.

Mr. Lopez. -- because of -- because of their isolation having resources prepositioned would be very helpful.

Mr. Peters. Let me go back a step, because you are still -- I think you are still -- you are still framing the response issue. Let me just --

Mr. Lopez. We are very raw there. Yes, sir.

Mr. Peters. -- give you an example of something that I just read about, which is Tesla restoring power to the Children's Hospital in Puerto Rico with a solar and storage project.

Now, it seems to me, I know -- I think that Puerto Rico burns bunker fuel, which is a logistical issue. You've got to get that -- you got to get there and, obviously, it speaks to the age of the power plant.

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You have got -- I mean, I am sure you had a grid issues that are affected by the wind. But it does seem to me -- what I noticed in Puerto Rico was after the storms stopped, the sun was shining, and had there been distributed energy through solar -- smart solar investments, things like hospitals would be up online ahead of time.

I would certainly suggest that that is something we ought to be thinking about in these island places which are so isolated you can't just send a truck of bunker fuel out there.

Had we invested in solar in some of these facilities, particular the -- around the critical infrastructure like hospitals -- the Children's Hospital -- ahead of time, I think, you know, a lot of these people wouldn't -- wouldn't have been affected in the same tragic ways.

I guess -- maybe I will turn to Mr. Glenn and Mr. Coleman.

Do you have any sort of lessons learned in terms of pre-disaster investments we might be considering right now so that next time this happens we won't be so on our heels?

Mr. Glenn. Well, I am fairly new to the federal government.

I have been here two months --

Mr. Peters. Welcome.

Mr. Glenn. -- and prior to that in the private sector.

Thank you. I am enjoying it. Here is what --

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This is a preliminary, unedited transcript. The statements within may be inaccurate, incomplete, or misattributed to the speaker. A link to the final, official transcript will be posted on the Committee's website as soon as it is available. [PAGE] Mr. Peters. I enjoy it sometimes. [Laughter.] Mr. Glenn. Here is what I walked in and observed literally day one on this was the communications interaction and relationships that we had with our peers at the state level and at the local level as well. So the one lesson I learned was we cannot do enough coordination with our state and local and tribal partners to make sure that we know what their systems are, we know who the people are and we train together and work together so that we can respond to this and that is the huge takeaway I had from this for the -relative to the impacts in our region. Mr. Peters. Thank you. Mr. Coleman, my time is expired but maybe someone else will as you the question. Thank you. I yield back. Mr. Shimkus. Gentleman yields back his time.

The chair now recognizes the gentleman from Houston, Texas, Mr. Olson, for five minutes.

Mr. Olson. I thank the chair.

I would like to start out with a point of personal privilege.

Yesterday we found out that --

Mr. Shimkus. Not again.

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Mr. Olson. -- found out that a fellow Texan -- this is good.

Not good but sad. A fellow Texan, Gene Green, announced this will be his last term in Congress.

He is a dear friend, a great Texan. We will miss you, but thank you for your service, my friend.

Welcome to our four witnesses. A special Texas Aggie howdy to Chairman Shaw, and my question will be for you, Chairman Shaw and you, Mr. Coleman.

First of all, could both of you talk about the sorts of hazards you saw in the Houston area and all of the area impacted by Harvey after Harvey left?

I know, for example, we had some pretty foul water that threatened with bacterial infections and we had debris piles that were magnets -- as mentioned, snakes, rates, other animals.

In fact, a young girl who lives in Texas 22 in Sienna Plantation was out working in Wharton, was bit by a copperhead snake in a pile of wet soaked clothes. So my question is do we know anything about how to respond to these threats with Harvey or was it just a larger scale of what you know you have to deal with when a storm hits like Harvey did?

Mr. Shaw. Thank you, Congressman.

Certainly, with regard to this event, it is -- a lot of the issues you see are common to a flood event but uncommon from this

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nature of the magnitude and the breadth of the impacted area.

So with regard to flood waters, anytime we have floodwaters that are going to inundate wastewater treatment plants you are going to have bacterial contamination and that is why our response cooperatively with the EPA was to provide information about how to deal with contamination from flood water.

With regard to the debris, certainly the magnitude of the debris is a challenge and it is exacerbated because of the fact that you have waste haulers, for example, that may have contracts up and down the coast and when you have -- the impacted area is up and down the coast you don't have enough resources there potentially to respond in a timely manner and it is just, you know, 30-plus million cubic yards of debris is an awful lot of debris to deal with.

Mr. Coleman. And I would just say that during a natural disaster or any type of disaster there are many, many hazards. Our goal really is to inform the public very quickly of how they can best protect themselves while they are also trying to restore and recover their own property.

With regards to flood waters, we really advise people to minimize their exposure because the waters are contaminated and there are many hazards associated with that.

You mentioned some of the other things. People have to

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really wear protective equipment and be completely vigilant as they work on their individual property to restore that. I meant, that is very, very important and we work closely with our state and local partners to make sure that that information is put into the hands of every individual so that they understand what they have to deal with.

Mr. Olson. You mentioned the constant threats out there. For example, a first responder in Missouri City had a flesh-eating virus. Somehow, it got into his -- he had a little small cut probably from working through a debris field and got exposed to that virus. So thank you, thank you for getting ahead of the curve.

And you guys mentioned, I think -- if I quote you correctly, Mr. Coleman, you said the coordination between you and Dr. Shaw was, quote, "exceptional," and I think it was on the ground and that is what -- that is my opinion as well.

But I have concern. You said you prepared for that with exercise after exercise with TCEQ. How do you do that with a storm like Harvey, a big storm like that, and also how about with three storms?

You have Irma and Marie hit at that same time. Can you coordinate with different regions as opposed to TCEQ? I mean, boy, that is a big challenge, isn't it?

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Mr. Coleman. Yes, sir. It is a big challenge. We work very closely. There is an annual hurricane exercise that the state organizes that involves EPA, the Corps of Engineers, other state agencies as well where we really go through the game planning as to who does what making sure we have all of the proper contact information, everybody knows what their lane is, and what capabilities that they bring to the table.

So we participate in that. We also work on a daily basis to deal with much smaller incidents with the state so that our staff and their staff know each other well and they work seamlessly together to respond to these incidents.

Mr. Olson. Dr. Shaw, you want to add something to that?

Mr. Shaw. Yes. I would -- I would say that we actually -in one of those exercises we had the foresight to mock up a response
to a Category 3 hurricane making landfall in Corpus Christi.

Harvey was a 4, making landfall just north of Corpus Christi, but it points out the fact and the way I usually characterize the importance of these exercises is we need to make sure that whenever we show up for the real thing we are not making introductions to our colleagues and counterparts in other agencies.

We already know who they are. We know them by face and by name, and so those exercises are priceless so that we can hit the ground running, not having to make introductions to try to figure

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1754 | out a game plan.

We already have the game plan. We've already practiced it. We begin implementation.

Mr. Olson. Thank you. Mr. Chairman, I noticed my time has expired and I will close by saying at 9:54 this morning all four witnesses confirm they are happy my Houston Astros won the World Series title.

I yield back.

Mr. Shimkus. I hadn't heard that before so thanks for letting us know that.

The chair now recognizes Mr. Green for five minutes.

Mr. Green. Well, I am proud of the Astros, too. But I want to thank our panel for being here and thank the chair and the ranking member for holding the hearing today on Hurricanes Harvey, Irma, and Maria.

I also want to thank our panelists -- for the panel, particularly Administrator Coleman and Dr. Shaw, and I know the partnership that you've had between our regional office of EPA and the state has been -- even when I was in the legislature years ago.

And I want to thank the EPA for the decision last month after our new administrator viewed the site to remove the cancer-causing dioxins out of the San Jacinto Waste Pits, and that is both on

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the north side of Interstate 10 and the south side of Interstate 10. And it is an important issue in east Harris County.

I have represented it off and on over the years, first as a state senator and then in Congress and I shared it with Ted Poe.

Now I share it with Congressman Brian Babin.

So we need to fully remove the contaminated soil and accelerate it with the recovery -- discovery of the damage and the temporary cap during Hurricane Harvey.

Administrator Coleman, what is the time line for EPA to begin the removal of the contaminated material from the San Jacinto Waste Pits?

Mr. Coleman. Thank you, Mr. Green, for that question.

So, as you know, we've issued the recommended decision in October. We are working with both the Justice Department and the responsible parties on this special notice and negotiating a consent decree that will facilitate the specific design and then removal.

Specifically, we expect the negotiations to take six to 12 months in working with the responsible parties. The design activities can take as long as another six to 12 months and then the work will start.

So I can't give you a specific time frame because those negotiations are complex and do involve a number of issues that

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1800 we have to work through with them.

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So but that is generally what we expect to see.

Mr. Green. Okay. Well, I would hope you would provide information and EPA has been doing it to the constituents out there for, like I said, mostly Congressman Babin now. But I sure have a lot of people who go out and crab and fish right near those sites and I would -- we'd like to make sure they're not, well, consuming that but also to make it much more safer.

And so the process will take almost a year, and I understand the difference because the temporary cap is about a \$20 billion and then the permanent cap or the permanent removal is anywhere — the latest estimate, I think, from EPA was almost \$120 billion.

Mr. Coleman. That is correct -- \$115 million to \$120 million.

Mr. Green. And so I expect the responsible parties have the option of going to the courthouse and making that decision. But I understood the original report from the regional office to the national office was really strong opinion on what needed to be done.

Our district also includes -- and this is in our district and has been forever, it seems like -- the U.S. oil recovery in Pasadena, Texas, it is actually on a -- near a bayou in Texas. Pete's gone but it is Vince Bayou coming through Pasadena and into

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the Houston ship channel or Buffalo Bayou. And many members of the public and local media voiced concern about that toxic material mitigating into the Vince Bayou.

Was there any information from that site that it -- did any of that site bleed into the -- into Vince Bayou and ultimately Buffalo Bayou and the Houston ship channel?

Mr. Coleman. Again, thank you for that question.

As you know, the U.S. oil site consists of two nearly adjacent locations but they are separated by a road and they are different in elevation.

So the former city of Pasadena wastewater treatment plant was flooded and because of the nature of what they did there, which was treat wastewater, we do recognize that there were probably some releases of things that were at that site. But we also know that they never stored hazardous waste or recycled oil on that portion of the site.

The second portion of the site, which is located at a higher elevation, where they did process oils to recover, that site actually did not flood.

It did, of course, sustain over 50 inches of rainfall. So some of the buildings which are in somewhat disrepair there was rainfall that entered the buildings.

There was some -- we would call it storm water runoff that

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occurred and we did assess Vince's Bayou. We looked very close	ely
at the receding waters and collected samples. We did not see the	hat
anything significant left that upper portion where the waste	oil
was processed.	
So we feel confident that Vince Bayou only received so:	me
runoff from that lower area that was the former Pasadena	
wastewater treatment plant.	
Mr. Green. Okay. Is there a viable	
Mr. Shimkus. Quickly, please.	
Mr. Green or responsible party for the U.S. oil si	te?
Mr. Coleman. Yes, sir. We are working with the responsi	ble
parties. They say a group of investors who are actually work	ing
to both maintain stabilization of the site as well as working w.	ith
us on a more thorough investigation and, ultimately, a clear	nup
of that site.	
Mr. Green. Thank you, Mr. Chairman.	
Mr. Shimkus. Gentleman's time has expired.	
The chair now recognizes the gentleman from Ohio, Mr.	
Johnson, for five minutes.	
Mr. Johnson. Thank you, Mr. Chairman, and gentlemen, the	ank

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season, most people would have characterized the municipal solid

Mr. Lopez, prior to the hurricanes hitting Puerto Rico this

you for joining us today.

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waste landfills as a mess even on a good day, with 19 of the 2
landfills operating out of compliance with federal law.
So what's the status of the landfills in the in the wak
of the hurricanes today?
Mr. Lopez. So the landfill status, of course, as you
mentioned, we had challenges and continue to be challenges on th
island.
Debris management, which is really the response, is a
complicated undertaking. So there is pressure, of course, to pu
more material into the landfills.
But what we are attempting to do, working with Army Corp
and our partners, is to separate the waste streams and dispos
of them in a fashion that relieves pressure on the landfills.
So whether it be vegetative debris or hazardous medical wast
any number of elements that could wind up in a landfill w
are working aggressively to separate out and dispose of, workin
with the authorities in a proper fashion.
Mr. Johnson. So are they still a mess?
Mr. Lopez. So a landfill situation that existed prior t
the hurricane remains
Mr. Johnson. No. No. What are what's the status today

There has been no change in that.

So the landfills continue to operate as they did

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Our challenge -- incident challenge is handling the debris, keeping the landfills functioning but also handling the debris which could accumulate in the landfills if not properly intercepted.

Do you -- do you think that Puerto Rico should Mr. Johnson. keep its delegation authority under Subtitle D?

Ultimately, the -- and, again, we -- this will Mr. Lopez. be a longer-term conversation, Congressman. So our challenge will be to help support the local authorities. I feel that that is the appropriate thing to do.

We want to support them, give them capability, help provide resources where we can and also address other ways other than landfilling to address their solid waste.

But recognize that that is not EPA's function as a -- as a We don't usually do solid waste management. We defer to the local government authorities for the actual management of solid waste.

Is it -- is it fair to say that current debris Mr. Johnson. removal since the hurricanes -- current debris removal is going to further overload the already filled capacity in those landfills?

We are working to intercept it. There is a danger -- there is always a possibility. But we are working very

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aggressively and thoughtfully with the leadership to identify waste streams and properly provide siting to separate them out and mitigate them appropriately. So there is always a potential but we are working to minimize the impact.

Mr. Johnson. Okay.

Mr. Coleman, in your testimony you write that while each response has its own unique challenges, we remain flexible to address individual needs.

So as you indicated, things like geographical constraints, economic conditions, damage extent, and infrastructure vulnerabilities are all factors that shape federal agency response when a natural disaster strikes.

In other words, how we respond to Houston's challenges is clearly different than those of Puerto Rico's challenges. So how does the EPA currently ensure response efforts take these challenges and regional characteristics into consideration?

Mr. Coleman. So we work -- we have a national cadre of responders that work very closely together on training and that forms the baseline of how we respond.

As I mentioned, we have a set of technical assets -- the ASPECT, TAGA, PHILIS -- that also provide that specialized equipment. But then we work very closely with our state partners in each location as well as those other state agencies that we

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work with with our FEMA regional offices, with things called regional response teams that then do additional specialized training and facilitation as it relates to the specific incidents that may occur in different geographic areas.

So those multiple layers of training exercises, having the right equipment, allows us to then be adaptable and flexible in responding to all types of different disasters and events.

Mr. Johnson. Okay. Is there room for improvement?

Mr. Coleman. I believe that there's always room for improvement and, as Chairman Shaw indicated, the state does a after-action report. We do -- we are doing a similar exercise. We participate with the state side.

But we also have them participate and critique our work so that we can make improvements and we do that after each event and we memorialize those lessons learned so that as we incorporate that into our training going forward we are able to make those improvements.

Mr. Johnson. Okay. All right.

Thank you, Mr. Chairman. I yield back.

Mr. Shimkus. Gentleman's time has expired.

The chair now recognizes Dr. Ruiz from California for five minutes.

Mr. Ruiz. Thank you, Mr. Chairman.

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I want to throw out a compliment to my colleague from Ohio who just asked those questions. Those are very good questions, very insightful. Thank you for asking those questions.

I want to continue on that line in terms of coordination and some local flexibility problems that I saw when I went to Puerto Rico myself that was an unscripted visit.

I went on my own accord and I visited a lot of locations impromptu so I can get the real story and not the script that folks would like to give you, and I had great assistance when I was on the ground as well.

And by way of background, I am an emergency medicine physician trained in public health and also trained in humanitarian disaster response from the Harvard Humanitarian Initiative and other locations.

We talked about coordination. Let me just ask an open-ended question. Mr. Lopez, who is running the show in Puerto Rico? Who is -- who is really in charge?

Mr. Lopez. So, understandably, we are under a command and control structure, as we mentioned. Again, FEMA makes the mission assignments.

Mr. Ruiz. Okay.

Mr. Lopez. So mission assignments are handed out by FEMA.

Mr. Ruiz. So you would say FEMA is in charge?

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the Committee's website as soon as it is available.
Mr. Lopez. Through our command and control structure.
Mr. Ruiz. Yes.
Mr. Lopez. That that is again, as we interact we take
mission assignments from FEMA
Mr. Ruiz. Okay.
Mr. Lopez and we work with our headquarters in our
regional offices for support.
Mr. Ruiz. Okay. And how are you coordinated? Where
like, how does that information get down to the EPA folks that
are in the field?
Mr. Lopez. So we have a command and control structure and
in our region we have an incident coordinator.
Mr. Ruiz. Yes, and where is that incident coordinator
located?
Mr. Lopez. He is in Edison, New Jersey. We also have staff
Mr. Ruiz. In New Jersey.
Mr. Lopez we also have staff and this is this
is critical for Puerto Rico we also have staff embedded on the
island. So
Mr. Ruiz. Where were exactly are they embedded?
Mr. Lopez. Guaynabo.
Mr. Ruiz. Guaynabo.

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2007	Mr. Lopez. And also out of San Juan.
2008	Mr. Ruiz. And where else are they embedded? In San Juan?
2009	Mr. Lopez. San Juan.
2010	Mr. Ruiz. Okay.
2011	Mr. Lopez. So we have staff embedded there. We also have
2012	some staff
2013	Mr. Ruiz. Okay. So, you know, the point I am making is that
2014	when I was there the number-one thing you need is clarity in
2015	leadership, in roles and responsibilities, and having to bring
2016	in all the all the local players, as Mr. Coleman was talking
2017	about, and everybody in a very flexible rapid response group and
2018	I didn't see that in Puerto Rico.
2019	We are using a spoke and hub model that is basically run out
2020	of San Juan. Very top-down heavy information is being sent out.
2021	All the different agencies are working in silos. They
2022	weren't even communicating with each other. So there is things
2023	like you mentioned, obstacles in being able to reach certain
2024	geographic locations.
2025	I worked with the 82nd Airborne closely in Port-au-Prince
2026	right after Haiti. Those those men and women can move
2027	mountains to get supplies anywhere in the world and I didn't see
2028	that kind of coordination on the ground to get those supplies,

to get the people where they needed to go.

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So here is what I am proposing, and I am speaking to every else, is, you know, the challenges of Puerto Rico are very different than the challenges in Houston and Florida.

You don't have a large concentration of population with an infrastructure that is intact -- electricity and communication. You still have the majority of people without power. You still have the majority of people who have difficulty finding that clean water. And you say some of the -- some of the water systems are operational.

What does that mean, operational? Because I have been into some hospitals they say are operational but that is only one floor of the five floors of the hospital, but yet people want to tout them as operational.

So what we need to talk about is capacity and what is the capacity of the infrastructure to reach how many people.

Oftentimes, gentlemen, we get -- we get the reports of how many people on the ground, how many water bottles, how many systems.

But that is not the way that you manage or that you count accountability in a disaster response. We have to talk about capacity. So what is the capacity of the different agencies and the different infrastructure systems to provide the much-needed services?

And you are right, Mr. Lopez. Agua es vida -- water is life

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and so tell me, is there a water task force in Puerto Rico with different stakeholders and where is that water task force -- how is that water task force managed and who are the stakeholders in that task force?

Mr. Lopez. So it is a small group. So we have, again, FEMA. We have mission assignment. Our offices -- we work with the EQB -- environmental quality -- and with the state health -- excuse me, the territory health department.

So those are the principal actors.

Mr. Ruiz. Okay.

Mr. Lopez. And just, Congressman, if I may, we are on track on a regular basis. We do regular meetings with the island -- conference calls and interdiction of --

Mr. Ruiz. Great. My proposal is to have field command posts with all the different stakeholders to address local issues with local mayors and NGOs and the Puerto Rican government, the federal government, and other agencies working together -- pretty much what Mr. Coleman talked about that is occurring in other locations but have that in Puerto Rico more in the field so that you can have better decision making, coordination, and responding.

Your role is to test and monitor and to track changes. But then that needs to get translated to actual implementation in a

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much more rapid way so that goods and repairs can be made in a
transparent and prioritized way on the ground.
And so that is my time is up so that is my that is
my recommendation, given my experience and I think that we need
to move forward in trying to implement some of those.
Mr. Shimkus. Thank you, Dr. Ruiz. I agree.
We had a very similar hearing like this on the Energy
Subcommittee and the question I asked, well, who's in charge.
Mr. Ruiz. Yes, and
Mr. Shimkus. I would have loved for
Mr. Ruiz and right now we heard FEMA but then when I
was on the ground FEMA said Puerto Rico
Mr. Shimkus. I I
Mr. Ruiz and Puerto Rico says FEMA.
Mr. Shimkus. I don't disagree and I I wish that the
administration would have just parachuted 82nd there
Mr. Ruiz. I would have loved to have seen that.
Absolutely.
Mr. Shimkus to some of the very small villages and I
think we all would have been better best served. Then we could

have worried about who is responsible later. But you need to get service there immediately.

Chairman, if I -- just briefly, too.

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2099	last but not least, there is a joint field operations center there
2100	and we do have EPA incident commanders and we have branch leaders
2101	in Puerto Rico.
2102	So there is an incident command center there. Those other
2103	agencies are embedded but
2104	Mr. Ruiz. See, when you say that, though, Puerto Rico is
2105	big, you know, and you leave us with the impression that it is
2106	somewhere.
2107	But where exactly, and are they in the different
2108	municipalities and do we have the right people working in a group
2109	out in the field in those different municipalities, because when
2110	I was there they didn't exist.
2111	FEMA told me they didn't have field command posts. DMAT did
2112	not have field command posts. I spoke to different agencies that
2113	did not they said that this would be a good idea and something
2114	that they would be very willing to work with and actually I am
2115	meeting with HHS later today to address this concept.
2116	Mr. Shimkus. Great. Thank you. Thank you very much.
2117	The chair now recognizes the gentleman from Texas, Mr.
2118	Flores, for five minutes.
2119	Mr. Flores. Speaking of HHS, that is going to be my

I want to thank the chairman and ranking member for the --

question.

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for holding this hearing. I want to thank the panel for joining us today.

Under Emergency Support Function Number 8, the Department of Health and Human Services, or HHS as it is commonly called around here, is the primary agency for ESF Number 8 and includes support for potable drinking water, solid waste disposal, and other environmental issues related to public health.

I have got a question -- this question for Mr. Lopez and Mr. Coleman, starting with Mr. Coleman. Number one, have you worked with HHS to carry out this function regarding providing potable water and also solid waste and debris removal in communities affected by hurricane damage this season.

Mr. Coleman. Yes, sir. We do work with HHS. As specific to Hurricane Harvey, as the state and FEMA determined the specific federal assistance that is necessary. In this particular response, that role of HHS was somewhat limited because of, A, the state capacity was quite extensive and we had done a lot of coordination work with them, but embedded with my staff I have three members from the Centers for Disease Control and they coordinate and have reach back capability to both the CDC headquarters and HHS in general as any issue comes up and we are able to quickly address those and provide the support as requested by the state.

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2145	Mr.	Flores	. (Okay.	. Tha	ank	you,	Mr.	Cole	eman.
2146	Mr.	Lopez,	do	you	have	any	thing	to	add	regarding

Mr. Lopez. The only thing I would say, again, is that HHS is part of the unified command structure so that they are immersed in that conversation.

Our local engagement has been with the Puerto Rico Department of Health. So, ultimately, we do have the representation of health interests.

Mr. Flores. Okay.

Mr. Glenn, do you have anything to add?

Mr. Glenn. No, sir. It's part of that structure and we have been working with them.

Mr. Flores. Okay.

Mr. Shaw, you gave us a breakdown of TCEQ's costs for dealing with the hurricane response and you indicated that the funds to reimburse you would be coming from FEMA. Has FEMA been a good partner in working with the state of Texas and dealing with the response and recovery efforts?

Mr. Shaw. Yes, and there is sort of various aspects of how that operates. We have, in the initial public assistance reimbursement from FEMA, about \$700,000 anticipated for that cost and that is the initial travel and what have you, working with the initial response.

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We also have a \$15 million authorization from FEMA for us to work with EPA in dealing with the field operations, which includes a lot of our command and control -- our assessment and location of containers displaced and what have you in the field operations.

So \$700,000 for the initial component and \$15 million to work with EPA on those field operations.

Mr. Flores. Okay. What can be improved upon in terms of that process? It sounds to me like it has worked pretty smoothly. Do you have any suggestions for improvement?

Mr. Shaw. It is working well. Communications is the primary issue and we have a lot of lessons learned. So yes, I think we will learn more but I think the key thing is to point out one of the issues, for example, are lessons learned. We work very closely with EPA. In this event, we were able to very quickly deal with things such as fuel waivers that took weeks in past events and took hours in this event and that allowed us to focus on those critical issues, making sure we got water, wastewater, and immediate harm issues addressed quickly.

Mr. Flores. Okay. In this process, have you come across anything where Congress can help in terms of making statutory improvements to the Stafford Act or any other related federal statutes to deal with catastrophes like this?

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Mr. Shaw. There are -- there is room for improvement and the challenges, quite frankly, Congressman, are going to be those tradeoffs because, you know, as you look at -- and this is sort of outside of my lane -- but one example is dealing with the repairs on the recovery side of that to homes, for example, and I think there's opportunities to be able to get that done much more quickly and to do permanent repairs as opposed to something that is temporary.

The reason that I am interested in that is because getting those folks back into their homes has such a huge health and environmental impact because the longer it takes to get those homes repaired the longer you have those health issues associated with debris with people that are outside or displaced from their housing and then the economics associated with all those.

So there are room for improvement. A lot of those have to do with making sure that Congress is making the types of decisions about how to improve the efficiency of getting those repairs done as well as making sure that they're ensuring that those funds are expended properly and you avoid — there is going to be foul play involved and that becomes a huge issue as how much you balance, making sure you get the funds out there but you minimize the money that is fraudulently spent.

Mr. Flores. Okay.

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Thank you for your responses.	Again, I thank the panel for

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Mr. Shimkus. Gentleman yields back.

joining us. I yield back the balance of my time.

The chair now recognizes the gentlelady from Colorado, Ms. DeGette, for five minutes.

Ms. DeGette. Thank you so much, Mr. Chairman, and thanks to the witnesses for coming.

Mr. Glenn, before Hurricane Irma, you and the other leaders in Region 4 increased staffing of the Regional Emergency Operations Center, the deployed on-scene coordinators to the state emergency operations center, and you provided a Region 4 liaison to the FEMA Regional Coordination Center. Is that right?

Mr. Glenn. Yes, ma'am.

Ms. DeGette. And do you -- can you estimate how many senior leaders were deployed prior to the hurricane's landfall?

Mr. Glenn. Prior to the landfall, as far as our executive leadership I, myself, went down and we had two other senior leaders that worked directly for me went to south Florida, and then some individuals from headquarters were also down in Florida.

Ms. DeGette. Okay. Were you the most senior person down there before landfall or was there someone more senior to you?

Mr. Glenn. Prior to landfall, I was the most senior person in the Region 4 down there.

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This is a preliminary, unedited transcript. The statements within may be inaccurate, incomplete, or misattributed to the speaker. A link to the final, official transcript will be posted on the Committee's website as soon as it is available. [PAGE] Ms. DeGette. Okay. And, you know, it is like Mr. Coleman was saying, there was a lot of coordination with the state and local officials down there. Is that right? Mr. Glenn. Absolutely. Yes, ma'am. Ms. DeGette. So, Mr. Lopez, I want to -- I know you didn't arrive on the scene until September 28th but I want to ask you the same question, if you know. Before Hurricane Irma hit Puerto Rico, did the leaders in Region 2 increase staffing in the Regional Emergency Operations Center? Mr. Lopez. So, again, I started actually on October 11th. Ms. DeGette. Oh, okay. Mr. Lopez. But --Ms. DeGette. So do you -- do you know what kind of staffing was increased? Mr. Lopez. I would have to -- I would have to get back with you for detail. Ms. DeGette. Okay. Mr. Lopez. I have some assessments but I don't want to be inappropriate with a response. So I'd be happy to respond. Ms. DeGette. Okay. And so the questions -- you'll probably

need to get back to me on the staffing, the onsite coordinators,

and who the senior leaders were who were there prior to landfall.

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2260	The anecdotal evidence that we have is that whereas in Region
2261	4 they were all there before it hit, in Region 2 what happened
2262	was they were all rushed aside from the people who were already
2263	embedded there that you testified about before that we were
2264	already behind the curve because we had to send a lot of people
2265	in. So if you can get me that information that would be really
2266	helpful.
2267	And I want to ask you again to continue, Mr. Glenn, now,
2268	on September 12th there were 12 field hazard assessment teams
2269	conducting facility assessment support at chemical and oil
2270	storage facilities. Is that right?
2271	Mr. Glenn. Yes, ma'am.
2272	Ms. DeGette. Now, Mr. Lopez, do you know how many field
2273	assessment field hazard assessment teams were operating in
2274	Puerto and the U.S. Virgin Islands two days after Irma made
2275	landfall?
2276	Mr. Glenn. I can't tell you the number of teams but I can
2277	tell you that teams were on the ground so
2278	Ms. DeGette. You don't can you get me that answer,
2279	please, of the number?
2280	Mr. Lopez. I can get you the number, of course.
2281	Ms. DeGette. And how about Maria? Same thing?
2282	Mr. Lopez. I will have to get you the same thing. Again,

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the sites
Ms. DeGette. Okay.
Mr. Lopez as I mentioned in my testimony, were assessed
prior and afterwards. So there have been assessments ongoing.
But I can't tell you the number.
Ms. DeGette. Right.
But, again, you know, in Region 4 they had 12 teams on the
ground two days after. So what I want to know, and as several
of my colleagues on both sides of the aisle have said, is Puerto
Rico is a lot larger physically and more complex because of
transportation needs and other issues.
So I am just wondering two days after landfall in Puerto Rico
and the U.S. Virgin Islands how many teams did we have and what
were they doing.
Now, Mr. Lopez, I bet you can't answer this either.
Mr. Lopez. I will do my best, ma'am.
Ms. DeGette. Do you know how many teams did Region 2 have
in making boots on the ground assessments of Superfund sites two
days afterwards after Irma?
Mr. Lopez. As I mentioned, the
Ms. DeGette. If you can get me that information, too.

Mr. Lopez. We will get you the specific numbers.

Ms. DeGette. Sure.

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Mr. Lopez. But just to be clear, Congresswoman, there was
a presence
Ms. DeGette. Uh-huh.
Mr. Lopez and folks were on the ground assessing before
and after.
Ms. DeGette. I am certainly not trying to imply there was
no presence.
Mr. Lopez. I understand. I just don't have the correct
number.
Ms. DeGette. But like Mr. Glenn correct me if I am wrong
Region 4 had six teams on the ground on September 12th that
were making boots on the ground assessment of Superfund sites.
Is that right, Mr. Glenn?
Mr. Glenn. Yes, ma'am.
Ms. DeGette. So that is what I am wondering, Mr. Lopez, and,
frankly, I am a little concerned that you don't know. I realize

Ms. DeGette. So that is what I am wondering, Mr. Lopez, and, frankly, I am a little concerned that you don't know. I realize you didn't come in until October. But we need to know how robust and how quick the response was and the very fact that we are having this hearing, Mr. Chairman, and they can't answer any of these questions for Region 2 -- Region 4 has it Johnny-on-the-spot -- just goes to the concern that we are all -- that we are all expressing today and if I can get your answers maybe --

Mr. Lopez. Sure.

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speaker. A link to the final, official transcript will be posted on
the Committee's website as soon as it is available.
Ms. DeGette maybe my concerns will be alleviated. But
I fear that they will not.
Thank you. I yield back.
Mr. Shimkus. The gentlelady yields back her time and I thank
her for those questions. It just goes to my point of a standard
operating procedure and why are regions different when there is
a disaster heading in a certain area.
Ms. DeGette. Why is it one thing in one region and another
thing in another region?
Mr. Shimkus. Right. So thank you very much.
The chair recognizes the gentleman from North Carolina, Mr.
Hudson, for five minutes.
Mr. Hudson. Thank you, Mr. Chairman, and thank you to all
the witnesses for being here today.
Mr. Glenn, I particularly want to say welcome to you.
Obviously, Region 4 includes my home state of North Carolina. I
look forward to getting to know you better and working with you
in the future.
While the damage in Puerto Rico and the U.S. Virgin Islands

While the damage in Puerto Rico and the U.S. Virgin Islands is significant, Region 4, including Florida, sustained substantial damage from Hurricane Irma on the heels of rebuilding after the 2016 hurricane season.

There were several reports after Hurricane Irma of issues

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with drinking water systems and several communities under boiled
water advisories.
What is the status, Mr. Glenn, of drinking water systems in
Region 4? Are there still people without access to safe drinking
water?
Mr. Glenn. The information I have is that all drinking water
systems are operational in Region 4. We are not aware of any
people served by a system that are without access to potable
drinking water.
Mr. Hudson. Great. What about right after the storm? How
did the drinking systems fare during the hurricane?
Mr. Glenn. Well, as you know, any time a storm like this
comes through it has impacts. It has immediate impacts, and so
almost every municipality that was in the path of the storm did
experience some type of impact at varying levels.
The impact you've heard today physical damage, power

outages, personnel, chemical supply interruptions, and the like -- so almost every system was impacted and --

Mr. Hudson. In terms of water systems -- drinking systems? Mr. Glenn. Yes, sir. Drinking systems.

Mr. Hudson. Well, just on your assessment, are there any improvements to the drinking water systems that we could look at to help in future situations like this?

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Mr. Glenn. Well, as you know, we operate under the permission authority of the Stafford Act and we will continue to do so and fulfill whatever authorizations are provided for in that act.

Mr. Hudson. Got you.

For everybody, the whole panel, in June 2016 the National Infrastructure Advisory Councils recommended FEMA consolidate federal emergency response roles and responsibilities for water into a single ESF within the annex of the national response framework to improve coordination and reduce confusion and improve the information sharing and communication.

The 2016 recommendation repeats an NAIC recommendation from 2009 that declared DHS should elevate water services to its own ESF within the NRF to achieve higher prioritization of water systems during emergency response that opens up to at least everyone from FEMA.

And Dr. Shaw, you're welcome to join in too, but do you believe making this change is a wise move? I would just ask the FEMA regional folks to chime in.

Mr. Coleman. So with regards to that recommendation, we think that and my personal experience is that water infrastructure is extraordinarily important. It essentially sets the basis for when people can repopulate an area.

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So, you know, I think it is very important. I don't have a specific opinion on if it should be its own emergency support function but I think that working very closely with the state governor's office, et cetera, to make sure that in a response you restore service as soon as possible is the most important thing.

Mr. Hudson. So you don't -- you don't want to say whether making its own ESF would help with that coordination?

Mr. Coleman. I actually -- from my personal experience the coordination with the governor's office and the local officials is the most important coordination that needs to take place and when that takes place you're able to actually get the right equipment, infrastructure, or support to bring those systems back online.

Mr. Hudson. Got you.

Dr. Shaw, I see you are chomping at the bit. Please.

Mr. Shaw. And I am going to be supporting what Mr. Coleman said as well and that is that I think the key point is in my state it may be difficult for me to assess whether that -- what that need would change because we have such a focus on water and wastewater as our initial response in that.

I am thinking back through the days before, during, and after the landfall and I don't -- I have not identified the place where that would have changed things because we work cooperatively and

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our mission is first and foremost to get out and assess those issues that are immediate harm and key among those are water and wastewater systems and getting those back online.

We have partners such as with Texas -- I always get this wrong -- the Texas American Waterworks Association -- our TXWARN system which helps us to bring together different resources from different services that are available to get equipment in places. Those things are all working very well. And so my only concern with changes is making sure we don't lose what's working well because it is working well in the state of Texas. Obviously, you want it quicker, but those are tweaks as opposed to major overhauls.

Mr. Hudson. Got you.

I have got a little over 10 seconds. Do either -- Lopez or Glenn, do you have an alternate opinion?

Mr. Lopez. Just to reinforce, I was a local official and I was also on the ground during Irene and Lee. The issue of communication is really the critical issue.

So whether it is a single function or a coordinated function, you really need to be in the heads of the plant operators who know exactly what they need and how to get up and running. So if you can penetrate to that level quickly, that is really what you need.

Mr. Hudson. Great.

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[PAGE] 2444 Mr. Chairman, my time has expired. I will yield back. 2445 Thank you. 2446 Mr. Shimkus. The gentleman yields back his time. 2447 We want to thank this panel. You can tell -- we know you've 2448 travelled far and there is still a lot of work to do and so we 2449 are very appreciative of your efforts. 2450 And there are some members who have asked questions for you 2451 If you can do so in a timely manner, that would also 2452 be appreciated. Thank you for what you do and now go back to your 2453 regions and get to work. 2454 And with that, we will dismiss this panel and ask for the 2455 second panel to join. 2456 Okay. Vamanos. Let us go. You Texas Aggies, get out of 2457 the hearing room. 2458 [Laughter.] 2459 Olson, let's go. Hallway. 2460 We want to thank all our witnesses for being here 2461 2462

Okay. We want to thank all our witnesses for being here today, taking the time to testify before the subcommittee. Our second witness panel for today's hearing includes Mr. Mike Howe, executive director and secretary treasurer for the Texas Section of American Waterworks Association; Mr. Mark Lichtenstein, chief of staff, chief sustainability officer, State University of New York, College on Environment Science and Forestry; Ms. Lyvia N.

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Rodríguez del Valle, executive director of Corporacion del Proyecto ENLACE del Caño Martín Peña; and Mr. Trent Epperson, assistant city manager administration, City of Pearland.

So you were able to be here for the -- obviously, the first panel. This will be a smaller group but still as important as we get your statements into the record.

There will be some of us who will be here to ask the questions, as you saw in the first panel. We do appreciate you being here and with that we will start with Mr. Howe. You are recognized for five minutes and your full statement is submitted for the record.

You are recognized, sir.

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STATEMENTS OF MIKE HOWE, EXECUTIVE DIRECTOR, TEXAS SECTION OF AMERICAN WATER WORKS ASSOCIATION, ON BEHALF OF AMERICAN WATER WORKS ASSOCIATION; MARK LICHTENSTEIN, CHIEF OF STAFF AND CHIEF SUSTAINABILITY OFFICER, SUNY COLLEGE OF ENVIRONMENTAL SCIENCE AND FORESTRY; LYVIA N. RODRÍGUEZ DEL VALLE, EXECUTIVE DIRECTOR, CORPORACIÓN DEL PROYECTO ENLACE DEL CAÑO MARTÍN PEÑA; TRENT EPPERSON, ASSISTANT CITY MANAGER, CITY OF PEARLAND, TX

STATEMENT OF MR. HOWE

Mr. Howe. Thank you much and good afternoon, Chairman Shimkus and members of the subcommittee.

My name is Mike Howe, the executive director of the Texas Section AWWA and we manage the Texas Water/Wastewater Agency Response Network, or TXWARN.

The mission of TXWARN is to provide emergency preparedness disaster response and mutual aid assistance for water and wastewater utilities. TXWARN began after Hurricane Katrina when it was apparent that the coordination and prioritization of water utility needs was disjointed under the existing national response framework.

We in the water sector realized that we needed to develop a utility-to-utility mutual aid system. AWWA spearheaded the WARN initiative and collaborated with other stakeholders to

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facilitate the growth of WARN from the two-state program in 2006 to the 50 programs we have nationwide today.

Membership in TXWARN is free and is available to all public and private utilities in Texas, making it the largest utility-to-utility mutual aid program in the country with more than 1,200 utility members that provide services to 78 percent of the population of the state of Texas.

The Texas Section AWWA manages TXWARN and receives partial funding from the TCEQ via the state revolving fund program to facilitate training and exercises.

Hurricane Harvey made landfall as a Category 4 hurricane in Nueces and Aransas Counties on August 25th and, as you know, meandered to the northeast over the upper Texas coast for four days.

It presented water utilities with unique challenges. As the storm approached, we activated the TXWARN system on October -- August 23rd. We first began preparing support teams for the inevitable aid requests.

Ground zero for Hurricane Harvey was the small coastal town of Port Aransas. At daylight after the storm the local water utility manager assessed the damage to the community and the water system.

The power was out for the water pumps, one of the water supply

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lines from Corpus Christi was out of service, and the majority of the community's water systems were leaking.

As Harvey crossed Aransas Bay, it brought significant similar damage to Rockport's water and wastewater system. The first major request for TXWARN came early Sunday morning on behalf of Port Aransas. The water system had to be operational before authorities could bring the population back.

TXWARN contacted the San Antonio Water System, or SAWS, a little more than two hours away from Port Aransas and its management agreed to send equipment and manpower to Port Aransas. In less than 24 hours, SAWS had deployed 20 field staff and by Friday of that week they had completely restored service.

SAWS also responded to Rockport, performing repairs to it water and wastewater systems. TXWARN arranged to relief SAWS crews after 10 days from this grueling work with crews from the Austin water utility.

During the nearly two-week response period TXWARN was full activated, we managed more than 50 similar requests for large and small systems. We are very pleased with our response operations during Harvey but there is always room for improvement.

Specifically, I would like to call your attention to how the needs of the water sector are prioritized and coordinated as part of the national response framework, or NRF.

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The current organizational structure of the NRF largely reflects the 1992 federal response plan prepared by FEMA. That was 25 years ago. The experiences of the water sector since then suggest that this current model requires a thorough review and update.

The loss of drinking water and wastewater services compounds the complexities of all response activities and impacts the ability of first responders to sustain shelters, hospitals, and other first responding units.

Therefore, prioritizing the recovery of water and wastewater service is essential to bringing normalcy and commerce back to any community.

The disaggregated approach under the national response framework means that no single entity at the federal level has total responsibility for the water mission. This is our issue, and others at the federal level has also recognized this.

In 2009, the National Infrastructure Advisory Council recommended the Department of Homeland Security elevate water services to its own ESF category within the national response framework.

Seven years later, the NAIC recommended that DHS direct FEMA to consolidate federal emergency response roles and responsibility into a single ESF.

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Implementing these recommendations will be consistent with the approaches applied for similar critical infrastructure such as transportation, communications, and energy.

We urge Congress with its oversight jurisdiction and responsibilities to direct FEMA to reconsider how the NRF is used to support disaster response and recovery. This is vital for protecting public health, the environment, and all the communities we serve.

And thank you very much. [The prepared statement of Mr. Howe for

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2582 Mr. Shimkus. Thank you, sir.

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And now I would like to recognize Mr. Mark Lichtenstein from the State University of New York. You are recognized for five minutes.

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2586 | STATEMENT OF MR. LICHTENSTEIN

Mr. Lichtenstein. You pronounce my name better than I do. Thank you.

Chair Shimkus, Chair Walden, Ranking Members Tonko and Pallone, and honorable subcommittee members, thank you for the opportunity to participate.

Having just returned from Puerto Rico and the Virgin Islands,

I have many observations and concerns. But today I am only going
to focus on disaster debris.

I have more than three decades of waste management experience including with disasters. I am employed by the State University of New York College of Environmental Science and Forestry -- ESF -- in Syracuse. It is a different ESF than we have been talking about.

As immediate past president of the National Recycling Coalition, I helped create a task force on sustainable disaster debris management immediately after Harvey.

I have helped address issues in the island since 2009, working with colleagues like my partners to the left, and I am a member of the board for Island Green, a U.S. Virgin Islands nonprofit.

I have been working with local people to devise a sustainable

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approach for the storm debris. Some U.S. government responders are appreciated.

However, there is concern from some residents and other experts regarding the potential ecological and human health impacts of a disaster debris management method of choice of the Army Corps of Engineers -- air curtain incineration.

ACI is a past practice of FEMA and the Corps in these situations and they have proposed it for the Virgin Islands and possibly Puerto Rico as well.

This would add insult to injury, especially considering that much of the debris is clean vegetation. There are better ways.

During Superstorm Sandy in New York City, the Corps planned to use ACIs continuously for four months but they stopped after one month because they could not get them to function properly.

Air quality was exceeded during days of high humidity and this was November in New York City. Humidity is routinely extremely high on the islands. Local people and others are concerned that ACIs will emit pollutants that could cause pulmonary aggravation, particularly for individuals with asthma or cardiac diseases.

Diesel and gasoline generators, which you have heard about already today, and exposure to indoor mold are already aggravating existing respiratory conditions.

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If burning moves forward in any manner, appropriate agencies should be asked to address potential health issues, especially regarding existing conditions. The agency for toxic substances and disease registries should be requested to do a review of the health impacts of burning before it commences. EPA should be asked to establish air monitors downwind of the burners and burning should not commence until monitors are established and EPA immediately shares results with the public.

Much of the topsoil has been lost through storm water. have been hammered with rain since the hurricanes. So it is critical that the vegetative debris remain to help replenish the soil that the plants of the islands need.

When considering options like burning, it is essential to incorporate externality costs -- costs for which it is hard to calculate an immediate number like climate change, the impacts of depleted soils on the ecosystem, or health effects of air pollution.

These impacts can be reduced through other viable options and this is one reason groups like the National Recycling Coalition have opposed ACIs.

FEMA and the Corps have said they will take the governor's lead. Many in the Virgin Islands have asked their governor to oppose incineration. Experts from Puerto Rico, the Virgin

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Islands, and stateside have worked to develop a viable alternative including recovery of hardwood and then mulching and composting. This all could be done safely and efficiently.

Composting is a process that nature has perfected over millions of years. It has been successful in many locations at large scales and with other disasters like Superstorm Sandy.

Puerto Rico officials are working towards a similar sustainable plan. Providing a valid option to incineration can serve as a positive framework for other disaster-impacted areas in the future and that is key, and it represents a new sustainable scheme for debris and waste on the islands, going forward.

This is a once and done opportunity to get a leg up on acquiring the infrastructure needed for management of the island's long-term organic waste problem, which is about 50 percent of the island's normal waste stream. This gets to the questions about landfills earlier.

To help this sustainable option move forward, assistance could come in the form of a waiver of the matching funds requirement for the next 18 months while the islands build towards this more resilient and future-focused infrastructure.

Right now, FEMA is requiring the debris management solution to be fully implemented in 180 days and this is considered unrealistic for composting or burning.

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The residents and visitors of Puerto Rico and the Virgin Islands deserve our focused attention. They deserve clean air and a healthy ecosystem.

The hurricanes were certainly not desired, but this is a great opportunity to build a more resilient and sustainable future so that the islands can come back better than before.

Thank you on behalf of my institution, ESF, and SUNY, and we stand ready to assist the subcommittee as it continues its work.

[The prepared statement of Mr. Lichtenstein follows:]

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2689 Mr. Shimkus. Thank you very much.

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Next, we would like to turn to -- I don't know if it is Señora

or Señorita. Señor? Rodríguez del Valle.

You are recognized for five minutes.

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2693 | STATEMENT OF MS. RODRÍGUEZ

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Ms. Rodríguez. A disaster within a disaster --

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Mr. Shimkus. One moment, please. There is a -- just press

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a button there. You'll be fine.

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Ms. Rodríguez. Thank you. I will start again.

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A disaster within a disaster -- that is what the eight

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densely-populated communities on the Caño Martín Peña and others

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that were already under environment distress prior to Irma and

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Maria have been experiencing since the hurricane struck.

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The 25,000 U.S. citizens living on the eastern half of the

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Martín Peña tidal channel already feared rain. They knew about

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flooding. An average of twice a year heavy rainfall translated

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into severe floods with wastewater.

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or of waking up in the middle of the night to a wet bed and water

Accounts of raw sewage coming out of the shower and toilets

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to your knees and waste were common.

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They knew having to dry a wet mattress in the sun to have

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somewhere to lay down to sleep at night. They also knew disease.

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The prevalence of gastrointestinal disease in the Cano was of 31

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percent in three months, compared to 20 percent in a full year

Forty-four percent of the children five years of age and

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for Puerto Rico.

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under living close to the Caño had asthma. People had experienced the dengue fever, zika, and chikungunya epidemics. There have been reports of leptospirosis, a disease transmitted mainly by contact with the urine of rats and other animals and which can be fatal.

The Martín Peña channel stretches for 3.7 miles across San Juan, connecting San Juan Bay, where Puerto Rico's busiest port is, to the inland San Jose Lagoon to the east, vital for the stormwater management of the adjacent Luis Muñoz Marín International Airport. It is part of the San Juan Bay, recognized by the EPA for its national significance.

From a 200- to 400-feet wide navigable channel, today it is barely five feet wide in some areas. Adjacent communities lack sewer systems and the stormwater system has collapsed. The San Jose Lagoon has lost superficial area and depth, increasing the risk of floods at the airport and other communities throughout San Juan.

If historic -- if history were to repeat itself, almost a century ago after two major hurricanes and in the midst of an economic depression, persons migrated to San Juan and the wetlands around the Caño became home.

Prior to Maria, the barrios which survived decades of eviction and gentrification were already a symbol of resiliency,

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2739 empowerment, and grass roots organization.

Residents engaged in an unprecedented participatory planning process that led to the creation of the comprehensive development ENLACE Caño Martín Peña project. Since then, together with the public and private sectors, they moved forward an agenda of long-term resiliency that has the potential of transforming the city by reconnecting its navigable bodies of water.

Recovering the Caño with participation means healthier and safer conditions for the residents without fear of gentrification thanks to a community land trust recognized last year with the United Nations World Habitat Award.

And then Irma and Maria struck. Close to 1,000 families lost totally or partially the roofs to their homes. Approximately 75 homes were totally destroyed. The communities experienced another severe flood with raw sewage, only that this time around it lasted for four days.

Approximately half of the trees along the Caño fell and together with the debris from the destroyed houses further blocked the Caño and the storm sewers.

Since Maria, it only takes 15 minutes of rain for floods to start. It even floods on a sunny day. We already have had two significant floods in the past two months, which have been

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2762 affecting other areas of San Juan as well.

Since Maria, water quality throughout the estuary has significantly worsened. The disturbance of the Caño and uncollected debris from streets caused a rat infestation and augmented the risk of mosquito-borne diseases. Alligators are approaching people's homes. Tarps and Corps-installed blue roofs are already in place. However, there is mold and water filtration.

Fifteen years of organizing allowed for ENLACE, the grassroots G-8, and the land trust to work with partners and bring aid. However, the crisis is far from over.

Now, imagine living in a state of never-ending crisis and trauma -- whole families sleeping on the floor on the room that does not get wet after sleeping under the rain for many days in the capital city of Puerto Rico, San Juan.

Using federal recovery funds to support initiatives like the ENLACE Caño Martín Peña project presents a unique opportunity for an emblematic recovery process that increases Puerto Rico's long-term resiliency and sound economic development.

Investing in the ecosystem restoration of the Caño infrastructure and related acquisitions and relocation supports equitable development and participatory democracy.

There is already a credible and proven institutional and

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policy framework in place and engaged community and partners, shovel-ready projects and NEPA compliance for the ecosystem restoration piece elaborated under the Water Resources

Development Act of 2007.

Due to the current crisis, the Caño cannot keep waiting for ordinary processes to occur. At a time of severe political, economic, fiscal, and financial challenges, support from the U.S. federal government is crucial.

That is why I urge Congress to pursue the inclusion of this project and all of its components in any upcoming disaster recovery bill for Puerto Rico.

This project is necessary and should be a priority due to serious repercussions in the San Juan Bay Estuary, public health, and safety.

And finally, I want to stress the importance of ensuring that any funding related to Martín Peña or other communities in a similar situation promote on-site resilient recovery rather than displacement and gentrification and for assistance policies to be context sensitive to allow for a just and equitable disaster recovery.

We are concerned that FEMA individual assistance programs requiring families in need for housing to leave outside the flood plain can make families in desperate need to leave their

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When this happens in areas where resilient onsite alternatives are visible and that have been under pressure of displacement and gentrification due to their strategic location, those who have struggled for their lands for decades can end up being uprooted.

No person should leave fearing the rain and no community should be displaced when there is an alternative at hand. With your support, long-term solutions that also keep Puerto Rico face -- help Puerto Rico face its economic crisis such as this project will become a reality.

An official visit to Puerto Rico I do invite you to come and visit the work we've done. Thank you.

[The prepared statement of Ms. Rodríguez follows:]

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2824 Mr. Shimkus. Thank you very much.

Now I would like to turn to Mr. Epperson. You are recognized

|| for five minutes.

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| STATEMENT OF MR. EPPERSON

Mr. Epperson. Good afternoon, Chairman, and members of the subcommittee.

My name is Trent Epperson. I am the assistant city manager with the city of Pearland in Texas and I am pleased to be invited here today to present to you the effects of Hurricane Harvey as it occurred in the city of Pearland, especially as it relates to critical water and wastewater infrastructure and the need to make that infrastructure resilient and redundant.

The city of Pearland is a suburban city of about 120,000 residents just south of the city of Houston. It has been one of the fastest growing communities in the nation over the past 15 years.

We have grown from a population of about a little over 30,000 in the year 2000 to today over 120,000 to where we are the third largest city in the Houston Metro area.

During Hurricane Harvey, with its unprecedented flooding, Pearland experienced structural flooding affecting over 1,700 residents, 50 businesses, and flooding to critical infrastructure including two wastewater treatment plants.

Most of the flooding occurred along Clear Creek, which, germane to this subcommittee is a 303D-listed impaired water body

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for bacteria. With a 500-year storm event, it is -- it was estimated before this storm that about 7,000 residents in the Clear Creek watershed would flood. I believe we saw that or more in Pearland and the downstream communities.

There is, however, a U.S. Army Corps of Engineers drainage project that has been on the books since the '60s but yet to be funded.

Based on the studies associated with that project, approximately half of those residents that flooded in the watershed would likely have been spared during Hurricane Harvey.

Additionally, critical infrastructure within the watershed would not have flooded and failed as well. Although the city of Pearland has grown rapidly, our new development and our new infrastructure follows current codes and standards.

The result was that in those newer areas we experienced very minimal flooding and that is in areas where we have added tens of thousands of new rooftops over the past 15 years.

So we see that along with the completion of the Clear Creek drainage project what is needed is funding for continued sound investment and resilient and redundant critical infrastructure, especially to bring the older infrastructure to current standards.

The most critical of those infrastructure pieces are water,

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wastewater, and the automated systems that control that infrastructure. It is a critical life safety issue for any city to have the ability to deliver clean safe drinking water during a disaster.

For Pearland, this critical infrastructure must have adequate generator power, flood proofing, and adequate elevation to survive a minimum of a 500-year storm as well as able to withstand Category 4 hurricane winds.

During Hurricane Harvey, our water system performed very well with only one water well sustaining minor damage due to power surging. We never lost pressure and we were always able to deliver that clean safe drinking water.

Unfortunately, some of our adjoining communities and the smaller water systems around us were unable to do that and did have to issue boil water notices.

Additionally, continuity of service in treating wastewater is critical for citizens sheltering in place and the return of evacuees when they return -- when they come back to their homes.

We must ensure that wastewater is adequately treated and not released during a flooding event because that can affect the downstream water quality in our streams and bayous.

In our area, wastewater facilities are often located in low-lying areas near the stream that they outfall to, making them

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vulnerable to flooding, and therefore a lot of them are in need of the same resiliency and redundancy criteria applied to our drinking water facilities.

During Harvey, unfortunately our wastewater system did not fare near as well as our wastewater system. Our Longwood wastewater treatment plant, which was originally built in the 1960s and is sited in one of the old oxbows of Clear Creek, was inundated with flood waters and inoperable for up to 72 hours during the event. The estimated damage to the plant is about a million and a half dollars.

But due to the proximity of the plant to the creek, instead of making those expensive repairs on a plant that is vulnerable to the next flood, this facility should have its flows redirected to an adequate plant to mitigate any future damage or loss of service.

One final critical piece of infrastructure to our utility operations is the Supervisory Control and Data Acquisition System, or SCADA.

What SCADA is is it is basically a system that allows us to monitor and control our critical water and wastewater facilities remotely.

These systems must be redundant and resilient to provide continuous connectivity to those facilities throughout an

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SCADA is indispensable to ensure the plants and the lift stations are operational and properly functioning when we cannot reach those facilities due to high water or debris.

During Hurricane Harvey, for three days we could not physically access 18 wastewater lift stations which are critical to getting the wastewater to the plants. Due to a lack of SCADA redundancy, we were also unable to monitor many of these facilities remotely.

The city of Pearland, although challenged, fared relatively well through Hurricane Harvey and will recover stronger than we were before the disaster.

As we rebuild, we look to ensure our critical infrastructure is able to withstand flooding, high winds, and other potential disasters.

To do this, we must have adequate recovery and mitigation funding available so that we do not just rebuild our critical infrastructure to its original state but we rebuild resilient redundant infrastructure ready for the next disaster.

Thank you, Mr. Chairman.

[The prepared statement of Mr. Epperson follows:]

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Mr. Shimkus. Thank you very much. I appreciate the opening statements. I want to start by then recognizing myself for five minutes for a round of questioning.

And I have some here prepared in front of me but I really want to go off script a little bit, and if you would hit the time, too, Jerry.

The -- you sat in on our -- the first panel, which was long with a lot of extensive questioning and I think there was a consensus by my colleagues on both sides that maybe we are just not organized right and I think it addresses all three of your kind of positions because, one, it deals with, you know, the debris management issue, who makes the decision and for what purposes.

Obviously, the estuary and the river systems, but we also want to make sure that if we go in this direction how do we not -- it was mentioned in the first panel -- how do we not stumble on them having a centralized government get involved in things that are working, right.

So let me -- let me go and turn to each one of you and, Mr. Howe, my questions were going to be -- going to be totally directed to you but I really would like everyone's response because this is kind of similar to the energy hearing where in some places there is mutual agreements and when you have states or local service areas you can coordinate and you can send folks to. Obviously,

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islands much more difficult, as we saw with the Energy Subcommittee.

So what would be a structure by which -- I think your testimony was there are things that are working -- be careful not to screw those up if there was a change in the -- in essence, a change of the Stafford Act in some delineation of responsibility.

Mr. Howe. In speaking to what I spoke in my remarks on the written testimony, also the issue of the multiple ESFs that water is under.

Now, for lack of a better term, under the WARN program across the country we have done a workaround. The WARN programs are utilities supporting utilities and most of those programs are operated independently of the state regulatory agency or the state operation center, even though as you saw from Mr. Shaw earlier we cooperate with them directly.

We are partially funded and we are unique to this, by the way. The Texas -- the TXWARN program is partially funded by the TCEQ. So we work very closely with them and the state operations center.

But we have identified an issue that occurs in the state operations center because they are broadly looking at public works and the totality of it -- that even though we are in touch with them and coordinating with them, they are not necessarily always

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2988 paying full attention to the water/wastewater side.

So during Harvey we had situations where we would loop back to them and have conversations and we would have to go through a complete refresh --

Mr. Shimkus. I wonder if I can jump in so I -Mr. Howe. Yes, please.

Mr. Shimkus. So your position is that, and I am learning these acronyms as we go through the hearing, it should be raised to an emergency support function level and that would help?

Mr. Howe. In other words, it is disaggregated now. If it was under one, then I think, as I've said to somebody before, that then those in emergency management would have the same red light flashing on water/wastewater as they do on lifesaving and everything else that they do because it would be a single support function and we know from the industry that there are -- you know, we have only talked about three essential services -- police, fire, and EMS. But without electric, water, and wastewater the first three can't function.

Mr. Shimkus. Okay. Let me go to Mr. Lichtenstein.

Mr. Lichtenstein. It is a dichotomous thing. I drove all around the islands -- Saint John, Saint Thomas, Puerto Rico, Vieques. So need for plans ahead of time, clearly.

Standard operating procedures -- we talked about those

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earlier. But this is definitely a matrix thing. Can't be top down. It is not linear but yet there is a critical role for the U.S. government. What I saw, this dichotomous thing, was some unbelievable local efforts of stepping up to the plate. On the island of Vieques, and I don't know if you're familiar with that island but that is an island on the --

Mr. Shimkus. We used to debate it a long -- couple years ago all the time.

Mr. Lichtenstein. Yes. So here's a story about initiative. The U.S. Coast Guard, while Maria was still kind of hanging out, the captain there used initiative and sent some cutters over to Vieques before anybody else was there for days.

So how do you -- how do you value that and how do you enhance that kind of activity to help the locals? Clarity of leadership is key.

Mr. Shimkus. Right.

Mr. Lichtenstein. What I saw was lack of clarity of leadership. So this is matrixed and it is something that we are going to have to figure out how to structure and how do you value these local people that are just stepping up to the plate?

Mr. Shimkus. And speaking of local people, Ms. del Valle
-- Rodríguez del Valle?

Ms. Rodríguez. Yes. I have to totally agree with Mark

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Lichtenstein's remarks. In our case being a community in San Juan basically the after -- right after Maria it was the residents the ones that took care of themselves and the institutions that have been working with them for a very long time came in the next day and that was the only outside help that they received in practically a month and this was San Juan with a lot of partners -- previously built partnerships.

So the other thing that is helpful is for the -- in the case of the federal government it was very critical for us to have people on the ground that actually were able to listen, because sometimes you design a program that you think is going to work very well everywhere and not necessarily all the circumstances are the same.

So we were able to establish those relationships and improve dramatically the type of help that was being brought to the communities, particularly with the project of the blue roofs and other assistance that we finally got from FEMA and the federal government.

Mr. Shimkus. Thank you.

And let me, with my colleagues' permission so I can get Mr. Epperson on the record, Texas, local community -- how do we be careful that we are not part of the problem and, you know, we are from the federal government -- we are here to help, and then we

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3057	end up not being helpful?
3058	Mr. Epperson. Thank you, Mr. Chairman.
3059	It is a very local response and effort from the beginning,
3060	and with the experience of Hurricane Harvey we really could not
3061	get out, could not get in for several days where we are located.
3062	We did we did we do have other local government contacts
3063	throughout Texas that were able to send high water rescue vehicles
3064	that were able to help out.
3065	So I think that initial response it is very local and how
3066	you have to deal with that, and then once the flood waters recede
3067	and we start talking about projects to the enhancement projects
3068	and projects to make sure that the next time we have the high wind
3069	event or the high water event, I believe that is where we can
3070	partner with FEMA and the federal government and the other
3071	agencies.
3072	Mr. Shimkus. Thank you very much, and I appreciate my
3073	colleagues allowing me to go a few minutes over.
3074	Now I would like to turn to Mr. Tonko for five minutes.
3075	Mr. Tonko. Thank you, Mr. Chair.
3076	Ms. Rodríguez del Valle, where water systems are now working
3077	in Puerto Rico are there still concerns with water safety?
3078	Ms. Rodríguez. Yes. Yes, and the people are being told to

boil the water before consumption. But when you have no power

This is a preliminary, unedited transcript. The statements within may be inaccurate, incomplete, or misattributed to the speaker. A link to the final, official transcript will be posted on the Committee's website as soon as it is available. [PAGE] at home, you know, and the gas is limited it is very hard to comply with those basic health measures. Mr. Tonko. I have heard that there are over 200 independent water systems on Puerto Rico but they serve a very small percentage of the population. Can you characterize the types of communities or people served by independent non-PRASA water systems? Ms. Rodríguez. Well, I am not an expert in this. But from my knowledge, these are areas particularly in the mountain side of Puerto Rico where it was very difficult to provide formal services. So the families did community aqueduct systems decades ago and they have been living on those for a long time. Mr. Tonko. Thank you. And Mr. Epperson, your testimony mentioned that you need to make \$1.5 million worth in repairs to your water -- your wastewater treatment plant. How important is it to protect your community's investment by making sure that that facility is more resilient to future flooding?

Mr. Epperson. I think it is very important, you know, that we do have the plant up and running with temporary repairs.

Those are the more permanent repairs and -- but because of the location of that plant we really are going to look at an

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enhancement type project with that -- with that plant to send those wastewater flows to one of our other plants, expand that plant, because it is situated and located in a location less vulnerable to the rising waters that we experienced at this plant.

Mr. Tonko. And are there currently sufficient federal funding opportunities to help the communities assess and mitigate future vulnerabilities to their water supplies or water systems?

Mr. Epperson. I believe there are opportunities. I am not certain that they are sufficient. You know, we are exploring what those opportunities are right now and moving through that process.

Mr. Tonko. Thank you.

And Mr. Howe, I am interested in how FEMA can improve its emergency support functions for the water sector. How does it compare to other critical infrastructure sectors?

Mr. Howe. I think the difficulty we have is because it is spread out over multiple ESFs there is not a nationwide or entirety of a single operating system so it can vary from region to region, area to area.

As I mentioned, we were -- we were successful in Texas because we've almost -- we have made it happen that way. But it is not -- it is not consistent. So there needs to be a consistent structure of how that works and we believe under a separate ESF that would happen.

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And Mr. Lichtenstein, what types of pollution occur -- can occur from burning debris?

Mr. Lichtenstein. Clearly, particulates or smoke. But that is the question that we want to answer -- what else is happening.

So if it is a lower temperature burn there -- and if plastic -- I saw plastic tangled up with the debris and if that is burned it can potentially have dioxins, furans, polyaromatic hydrocarbons and other chemicals. But that really needs to be looked at.

Mr. Tonko. Thank you.

And I imagine that space is at a premium in areas like Puerto Rico and the U.S. Virgin Islands. What is the current state of the landfills there and what particular challenges exist because of the land challenge itself?

Mr. Epperson. Yes. I can't speak with authority to the landfills but I do have some knowledge. Some of them are really exceeding capacity and exceeding federal regulations. Others are well run and doing fine.

The main island of Puerto Rico, of course, has more land than the other islands. In the Virgin Islands there are serious issues.

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There are only two landfills -- one on Saint Croix and one on Saint Thomas. Both have capacity issues and operational So that is a big concern on those islands.

Mr. Tonko. Thank you.

And Ms. Rodríguez del Valle, if you had one recommendation to this subcommittee or to the committee in general, what would it be in regard to what you see right now in Puerto Rico?

Ms. Rodríguez. I think disasters kind of bring out the best of the -- of the society and also the institutional flaws, and we are seeing a little bit of that currently in Puerto Rico, not only regarding the way in which we have been able to address the crisis.

It has brought the best of the Puerto Rican people and its capacity to organize and do a great job when nobody else was doing But it has also brought to light issues regarding the way in which disaster relief was organized, particularly during the first days.

It seemed to many of us living there that there was a lot of disorganization and some of the decisions actually delayed assistance to the people who needed it the most.

I also wanted to add one point regarding Mr. Shimkus' question and it has to do with federal government aid. Actually being able to be culturally sensitive is something as simple as

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having FEMA officers visiting people's homes to speak Spanish because most people in Puerto Rico do not understand English and sometimes decisions were being done regarding the type of aids that these families received with a language barrier in the middle.

So perhaps that curtailed the ability of many of them to be able to actually get the help they needed.

Mr. Tonko. Thank you very much.

And with that, I yield back, Mr. Chair.

Mr. Shimkus. Thank -- the chair thanks the gentleman.

The chair recognizes the gentleman from Texas, Mr. Olson, for five minutes.

Mr. Olson. I thank the chair.

I am going to open with the praise and Texas brag about a friend and leader back home in Texas 22, Trent Epperson. And Trent, I should give you a proper Aggie greeting -- howdy, my friend. Welcome.

Trent is the assistant city manager of Pearland, Texas, as he mentioned. Pearland is the largest city in Brazoria County with over 120,000 people and growing, rapidly.

Trent helps to run their half a billion dollar capital budget as well as overseeing both the city's public works and utilities department.

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Chair, we are so proud of Pearland and Brazoria County's response to Hurricane Harvey. Please tell the committee how many people died in Brazoria County because of Hurricane Harvey.

Mr. Epperson. There were no people that died in Brazoria County during Hurricane Harvey.

Mr. Olson. Zero. Nada. Nil. No deaths. That's amazing, despite five feet of rain in parts of Brazoria County. Is that correct?

Mr. Epperson. Yes, sir.

Mr. Olson. Okay. Now the fun stuff -- the questions.

What kind of help did you get immediately after Harvey hit outside of Brazoria County from the federal government, from the EPA, maybe from FEMA, from other states, other entities?

What would you change about the storm response lines of communication now to the next storm that is coming? We know it is coming.

Mr. Epperson. As far -- as far as immediate help, I think it was mostly locals that were able to do the -- all of the immediate response needs.

We have been working with FEMA, meeting with them on a weekly basis since then. I believe that process for the immediate needs and the debris removal and developing our damage assessments is moving forward.

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One of the areas where I think that moving forward we want to improve as well as working with the feds improve is a buy-out program where we -- it has in the past been a -- kind of sporadic when there is a disaster.

We move forward with a buy-out program. It occurs several months to maybe more than a year after the actual event itself. And so we see a need for accelerating that. There are people that are out of their homes right now and don't know whether to repair those homes and make those repairs because they don't know whether there is a buyout opportunity or not.

So I think the ability to accelerate that and have that as an ongoing program even when there is not a disaster that just occurred would really help from a local's perspective.

Mr. Olson. Anything else you wish from Washington -- what we could do better to help you guys get through that? Because you guys were awesome but we can help you I think a lot more, much more -- much quicker.

I mean, it just seemed like over and over people calling me up, I can't get somebody to come out to my house to, you know, look at my house and assess the damage.

For example, Pearland had five large -- four large dump trucks go in that heavy water. Three are flooded out. You are down to one dump truck. And so I guess, you know, we are trying

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Anything we can improve on here in D.C.? Because you all do great but we want you to do better. We can help, I think.

Mr. Epperson. Yes, sir. I think any of those resources would help.

Mr. Olson. The previous panel, Trent, talked about planning scenarios with TCEQ and EPA. Has Pearland been involved in any of those? Just -- have you been involved at that level planning for another hurricane like Harvey? Have you been involved in that or are you sort of outside looking in?

Mr. Epperson. We work, you know, with our local county emergency management as well as with the Texas Department of Emergency Management. But we haven't had any direct contact or work with those folks prepreparing for emergency.

Mr. Olson. Have you had to adjust your plans for an 800 years flood as opposed to a 500-year flood or a 100-year flood? I mean, how much have you adapted to what happened in August with Hurricane Harvey?

Mr. Epperson. I think the big thing we have recognized is that our newer infrastructure designed to current standards fared very well even with the unprecedented flooding and that it is our areas that have been there for many decades that were designed to other standards or before standards were in place that were

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mostly affected and that those are the areas we want to concentrate on for future drainage improvement projects as well as other resiliency projects to make sure that those areas also are able to withstand the same type of flooding.

Of greatest importance to that is the Clear Creek project which is a project sponsored by the Harris County Flood Control District and I believe that project has been submitted for federal funding to move forward after this event.

Mr. Olson. I am out of time and I want to say Gig'em my friend. Thank you.

Mr. Epperson. Gig'em.

Mr. Shimkus. The chairman now turns to another Texan, Mr. Green, for five minutes.

Mr. Green. Well, I appreciate it and I married into the Aggie family. My son and our son-in-law and my two grandchildren now think they are going to be in the Corps Cadets.

But be that as it may, Mr. Howe, in your testimony you know that some of the city of Houston's wastewater operations were overwhelmed during Harvey.

Can you describe in detail on what locations? Was it mainly upstream, Buffalo Bayou? Because every creek and bayou I have in my area in east Harris County were out of their banks. But it was mostly the city of Houston and Buffalo Bayou that the

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[PAGE]

3287 | wastewater treatment plants were overwhelmed?

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Mr. Howe. Yes, sir. It is my understanding on the west side of Houston the wastewater plant was flooded out. Part of that was due to controlled flooding out of the Addicks Reservoir, as you are familiar with that area over there. They currently --

Mr. Green. I don't represent it but I am familiar with it.

Mr. Howe. Yes, I understand. The -- I understand from the city of Houston water utility they are currently dealing with a wastewater line that is in Buffalo Bayou where the bayou is sloughing off continually.

They have a wastewater line that is on the side of that. It is an ongoing issue. Obviously, there needs to be a coordinated response on how that gets rebuilt and how their line gets reinforced or moved.

So it is these ongoing issues. The water system operated just fine. They were able to put coffer dams around the northeast water filter galleries to keep the water system operating fine but wastewater, by its very nature, as Mr. Epperson mentioned, are built in lower level areas and they had some significant flooding, particularly in Houston's lift stations, too.

Mr. Green. We have untold number of water districts outside the city limits of Houston or Pasadena and I know they -- because they are built on the bayou close to where they're -- they treat

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the effluent and it goes -- they have permits to go into the bayous.

Do you have any idea on how many of those were also impacted?

Mr. Howe. I don't have specific numbers. The difficulty

for -- in our response during Hurricane Harvey, obviously, was
that there was a delayed response. No one could do an assessment

Many of those operations were, obviously, shut down when the flooding started but it doesn't mean there wasn't a pollutant. I don't have specific numbers, though.

until the flood waters went down.

Mr. Green. Okay. Well, I have the eastern part of the county and, like I say, I could give you the watersheds from the bayous and -- but Buffalo Bayou and the shipping port of Houston actually runs right in the middle of our district, and whether it be Brays or Sims, Sims Bayou looked like it was the one that didn't flood as bad as Brays and on the north side I have Greens Bayou, Carpenters Bayou in channel view, Hunting Bayou and -- Mr. Howe. I grew up in Houston. I am familiar with all

Mr. Green. All these -- and all of them were and these were multiple flooding experiences and we continue to work with the Corps of Engineers and, of course, our Harris County Flood Control District -- that a lot of our neighboring counties don't have flood control districts but in Harris County we pay property taxes to

these.

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be able to have drainage ditches and, you know, take care of our bayous along with the partnership with the Corps.

So it is a big challenge. Your -- Mr. Howe, in your testimony you said that the city of Houston was overwhelmed. What part of the city did they -- did they shut down the wastewater system or did --

Mr. Howe. It is my understanding --

Mr. Green. -- what part of the city was impacted?

Mr. Howe. Excuse me. I am sorry.

On the west side of Houston they did have one of their wastewater plants completely flooded out. It was out of service. They were advising people not to flush, those who were still in their residences, and they were -- they had the resources to get that plant back online in three or four days, once the water -- the water receded.

You know, as you may be familiar, most of Houston's wastewater system is with forced mains or lift stations and they have a significant number of those and I know a number of those were flooded out.

Houston proper was pretty resilient and a lot of that, much like some of the other cities around there. So I don't have specific details as to how they came back but they were very resilient on their own.

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Since Hurricane Ike they have built up a lot of resiliency within the city of Houston.

Mr. Green. Well, in Harris County also many years ago, because you recognize we were subsiding, the city of Houston is now almost totally on surface water and they have surface water rights.

I know Pasadena I represent complains about having to pay high water rates for the city of Houston.

So we have a central location for surface water so we don't continue to subside. Do you think there is -- should be an effort to try and create mega wastewater treatment facilities and partner with an untold number of water districts that we have and see how that would work?

Mr. Howe. You know, obviously, sir, that is a local decision. The first thing, when you said it, that popped in my head was the -- an example of the Trinity River Authority in the Dallas-Fort Worth area, which is a mega wastewater operation without regard to issue.

You know, most of Houston's water comes from the discharge in the Trinity River from TRA. That might be a possibility. I mean, there are any number of small package plants in the muds that you spoke of outside of the Houston area.

There might be an effort to look at consolidating those in

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a system that would be more efficient. There are enormous costs involved in doing that and getting to that, you know, rerouting sewer lines and everything else. But it is those sort of options I think everybody needs to look at.

Well, and I am already over time, but with the Mr. Green. amount of money we are going to have to do to redo those plants and also the houses and the businesses downstream who are in danger of, you know, because of that effluent being in their houses and their -- in their businesses.

So thank you, Mr. Chairman.

Mr. Shimkus. I thank my colleague.

I want to thank the colleagues who stayed and participated in the second panel. I personally really appreciate it. observation is that these disasters that we are talking about in this event, if you noticed -- for the panelists, those of us who have been through them really kind of the same type of story.

I do think there is an opportunity for us to work collectively and look at the Stafford Act. This is multi-jurisdictional, This would be a long-term, five, six years trying to get a response.

I am -- you know, I just -- I keep thinking about big piles of stuff and how do you separate them. I am a big trash energy I would like to see more of that. We have some locally that

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Buy-out programs -- we just had a flood five years ago.

People are just getting their checks now. So there is a lot of ways these things can be fixed so we do appreciate your testimony.

I also want to tell my -- to the committee that we have five legislative days to submit opening statements. I forgot to do that at the beginning of this.

I want to thank you all for being here and pursuant to committee rules, I remind members that they have 10 business days to submit additional questions for the record.

If you get those, if you would reply we would appreciate it and I ask that you submit your responses within 10 business days upon receipt of the questions.

Of course, if your -- can't use your electric stuff because you are in a place where there is no electricity that might be a challenge. But we do appreciate you being here. There is a lot of work for us to do.

Thank you for your time and with that, I will adjourn the hearing.

[Whereupon, at 12:56 p.m., the committee was adjourned.]